DEC 16 1924

THE BUILDER

A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOLUME CXXVII. No. 4270. *Eighty-second Year.*

FRIDAY, DECEMBER 5, 1924.
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CXXVII.—No. 4270. DECEMBER 5, 1924.

HOUSING SUGGESTIONS

THE articles which we have recently published on housing, and the articles and correspondence which have appeared elsewhere, all point to the conclusion, which many must have long reached, that the production of houses, like everything else, must, to be successful, eventually return to a business basis untrammelled by political considerations. This, at least, we hope Parliament realise, and we hope consideration will now be given to the views of all those in the building industry who are chiefly concerned in the production of houses. For some years we have questioned the policy pursued by the governments of the day, and have expressed the belief that the problem has not been fully considered in the light of the experience of the professional and business interests concerned, and that the suggestive proposals for dealing with the acknowledged difficulties inherent in the problem which are frequently made in the daily and technical press do not appear to receive the consideration they deserve. One such suggestion is made by a well-known architect, who writes as follows :—" One is almost tempted to suggest that it would be the best policy to allow rents to rise to an economic value at present building prices and meet the inevitable demand for enhanced wages which would follow and which would at least be spread over the community at large and would probably cost no more than subsidies and officialism. Such a course would, at least, dissociate housing from politics." During the exceptional circumstances of the war, tampering with the laws of supply and demand was no doubt necessary, but this is no reason why we should attempt to make this disastrous proceeding part of a general policy in normal times. Under present conditions immediate return to an economic basis is doubtless impossible, but does our attitude towards housing not suggest that we are losing our individuality and becoming too dependent on collective official action ? Great schemes are very laudable, but carry with them great delays, much political complication, and officialism. We venture to submit that it is time we honestly faced facts. There are not enough operatives in the building trade to go round, and the small difference between the wage of the skilled and unskilled worker is reducing the former class. Being in great demand the operatives are making us directly and indirectly pay for their services at as high a rate as possible regardless of housing or anything else, and will continue to do so until the public cannot afford more and demand consequently slackens. This may not be agreeable, but markets have been cornered before and will be again. Those who have sat on profiteering committees know that the cost of materials, though on paper it may be otherwise, actually cannot be regulated by government control, but will continue to obey the laws of supply and demand. In these circumstances can any uneconomic State building scheme hope to succeed ?

Until normal conditions are restored can we not revive something of the old colonising spirit and try to help ourselves ? This, at all events, is another suggestion, which has been made not only by laymen, but by people interested in the building trade, and though it would not deserve consideration in normal times, as a temporary expedient for dealing with our difficulties it may be worth trying. During the war it was necessary to put people into all kinds of new positions, and those with experience of such efforts know how exceedingly difficult the process was, but they also know in what a very short time anybody of ordinary physique and intelligence could be trained to do a limited piece of repetition work, even though that work itself was not very simple, and we have been asked : " Why should not our technical schools throughout the country undertake to train some of our unemployed in a very limited section of work necessary for erecting, say, a one-story cottage, possibly of timber for preference, as being easy to erect and free from monopolies ? These men would offer their services in teams arranged by their school. They would not call themselves, or be, building trade operatives, but would be given a certificate for proficiency in the small sphere of work on which they had been trained. They would be paid a fair wage, and would be responsible to the team leader who might in many cases be a man possessing some kind of useful previous experience. Such a scheme would, of course, have to be administered, but for a simple standard house of the primitive type this should not be difficult and might provide very suitable work for some of our ex-officers, particularly engineers, to whom we still owe a national debt. Materials could be supplied and bought, as far as possible cut and marked, ready for erection, in the cheapest markets. If any form of bonus on cost could be arranged without inviting scamping, it would be a valuable incentive to keeping down the price of these houses. The success of any such scheme would necessitate the entire exclusion of building by-laws and officials who live by their interpretation, apart from the bare requirements of health. The existing housing organisation could be usefully employed in this scheme upon questions of land and roads, and if it be objected that these houses would not be permanent, they might be confined to leasehold land on terms which would admit of their replacement when the next generation has developed saner views on economics. Under this scheme it should be possible, with perhaps the aid of some loan at low interest, for many in need of houses to form their own teams and erect a few houses between them, and even those in employment could do much in this direction during the summer months with the assistance of a versatile administrator to help such personal efforts."

The effect of such a scheme upon the unemployment problem should be considerable and lead to the absorption of many men suited for outdoor work without the necessity for transference to great distances as the need for houses is so widespread. Such a scheme would considerably augment the available supply of labour for housing, and those already in the building trade, having regard to the great arrears to be made up providing for more work than the trade can tackle, would hardly object to this effort to make provision for the worker. Further, we think that a great many ex-officers, to whom we owe a debt still undischarged, might be, as suggested above, brought into this scheme as administrators. We are aware of the Australian experiment upon short-time training for operatives in the building trade and the statement that this is being brought before the Minister of Health (see p. 886). So many fruitless efforts at dilution have, however, been made that we think this suggestion for independent action is worth considering. Will our Technical Schools—those with building courses taking the lead—get together on the matter and, if thought feasible, approach Mr. Neville Chamberlain ?

NOTES.

Manchester Architecture.

We must all welcome the interesting and informing essays on the architecture of our towns which have appeared in various papers from the pen of Professor Reilly, for his treatment of the subject seems of a kind likely to appeal to the cultured public. The *Manchester Guardian* enlisted his services in regard to Manchester, and the result is before us in a small volume.* Frankly, we think the discernment of the author has not been able to point to enough work of good quality to give Manchester citizens much cause for satisfaction in the record he has been able to make of her contributions to the art of architecture. Manchester is not, of course, so fortunate in her lay-out and development as Liverpool, which can show much that is attractive and something that is fine in many of its streets and open spaces. Manchester has its Piccadilly, which might even yet be made a striking and pleasing open place; and round about the Cathedral and railway stations the expert city planner could some years ago have directed the foundations of something worth having. Since we have known it, some of the Manchester thoroughfares, such as Market-street, seem to have deteriorated; and Deansgate is nothing like so good in its general aspect as one might have expected it to become. Of the one typical and striking example of a Manchester warehouse we have a rather inadequate illustration, but the subjects of the best sort are of somewhat ancient date, as the Bank of England, the Free Trade Hall, and the Art Gallery. Williams Deacon Bank, the Rylands Library, and the Opera House, uphold the credit of modern work, but the record of architecture in Manchester as presented in this book suggests how much this great city has missed in comparison with what such cities as Glasgow, Edinburgh and Liverpool are able to show.

* Some Manchester Streets and their Buildings. University Press of Liverpool. 5s.

Quick-Hardening Cement.

There has been an increasing demand recently for a cement which will set more rapidly than the Portland cements to which we have become accustomed, and cement chemists have for some time been experimenting with a view to the production of a quick-hardening cement at a cost which will not be excessive for the general requirements of the builder and engineer. So much progress in this direction has now been made that a new quick-hardening Portland cement is being put on the market, and tests so far undertaken by Professor Dixon at the City and Guilds Engineering College go to show that a considerable measure of success has been achieved. The tests, which are reported on p. 909, have so far only been undertaken up to the age of 7 days, but as they prove that at 48 hours the new cement has a greater strength than required by the British Standard Specification at 28 days, there can be no doubt as to the rapidity of hardening. Whether this strength will be maintained over a long period of years time alone will tell, but as it is a true Portland cement there can be no reason to expect anything but an increase of strength with age. Up to 28 days a completely satisfactory increase is indicated, and we hope to give the results of the 28-day tests, with some fuller particulars, later.

Sculpture on Buildings.

Are we right in assuming that one of the keenest critics of Mr. Epstein's figures on the Medical offices in the Strand is now objecting to their suggested removal? This sculpture was a striking example of Mr. Epstein's power, and added something of interest and vitality to Messrs. Adams & Holden's building, so why should it be removed when the fright of the critics has abated? The figures may not appear to have a particularly comfortable setting, but seldom does sculpture appear to be a really comfortable and valuable addition to a building, because architects and sculptors do not often work together in any really sympathetic way.

Thomas Weelkes Memorial, St. Bride's Church, E.C.4.

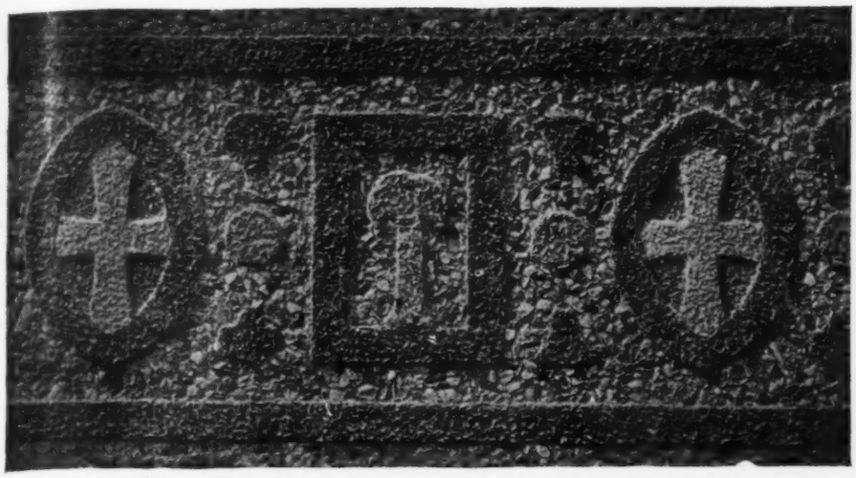
Mr. A. E. Richardson (Messrs. Richardson & Gill, FF.R.I.B.A.), Architect; Mr. P. G. Bentham, A.R.B.S., Sculptor. (*See p.* 895.)

Building Trade Dilution.

The officials who are responsible for advising the Government on the housing problem are, we are informed, reading this week a report of a committee appointed by the Master Builders' Association of New South Wales, which gives details as to the success of a scheme for intensive training for bricklayers and plasterers instituted last year. A similar scheme is under consideration for this country, and the replies from local education authorities that have been received by the Board of Education show that in the majority of cases technical schools in England and Wales may shortly be used in order to provide the increased labour needed for housing. Accordingly, the report of the Sydney experiment is of special interest. Preference for training was given to returned soldiers and builders' labourers. At the end of a 13-weeks' course students were tested as to the number of bricks they could lay in eight hours on a plain straight 9 in. wall. The average of students up to 21 years of age was 911 bricks, while the average of 10 students aged between 26 and 30 was 1,077. After 30 years of age the average decreased. Plastering was also taught with satisfactory results. It should be noted that the trainees were selected as far as possible from those who had relations engaged in the building trade, and from bricklayers and others who are used to outside working conditions. It is claimed in the report that "these results prove conclusively that the idea that a trade must be learned between the age of 16 and 21 or not at all was a fallacy, and that a man who has realised the value of having a skilled trade at his command and has made up his mind to learn can do so more quickly than a boy who has not long left school and who has not realised the value of learning a trade.

Plumbers and Housing.

There is much regret in building quarters at the postponement of a conference of the representatives of the plumbing industry—a trade essential to the success of the Government housing policy—that had been summoned to meet on Thursday at the Board of Education. It is feared that this unexpected postponement means that there is a danger of the failure of a national effort that was being made to raise the general standard of craftsmanship in the plumbing



Detail of Ornamental Band in Exposed Aggregate Concrete at the Church of the Sacred Heart, Washington. (*See p.* 895)

trade. This is far more than an industrial question, for efficient plumbing is essential to the health of the nation. This fact has always been recognised by Mr. E. Lesser, formerly of the Ministry of Labour, and now Chairman of the Plumbing Trade's National Apprenticeship Council, and his colleagues, Mr. W. D. Caröe, F.R.I.B.A., of the Worshipful Company of Plumbers, Dr. C. Porter, the Royal Sanitary Institute, Mr. H. D. Searles Wood, F.R.I.B.A., Dr. R. S. Clay, D.Sc., of the Association of Technical Institutions, and Mr. Hugh Davies of the Board of Education. The Council, on which sit six master plumbers and six operative plumbers, as well as the representatives of associated interests, has worked out a far-reaching scheme in order to train every plumber to be a true craftsman and to eliminate bad work. Proposals are under consideration for the formation of Provincial Local Councils to assist employers to see that all apprentices have a thorough grounding in the practical processes of the craft, and to encourage attendance at technical schools. The sudden breaking off of the Conference arranged for Thursday is causing much anxiety among those who consider that efficient training is essential for the success of any housing policy.

The late John Slater.

THE death of Mr. John Slater, F.R.I.B.A., will be heard with much regret by many of our readers, especially those architects of the older generation who remember the prominent position he occupied in the profession and the interest he took as a young man in the Architectural Association, and subsequently the Royal Institute of British Architects. He was a worthy President of the A.A. in 1887, and though he did not serve the Institute in that capacity he became a Vice-President in 1900–4 during which period and subsequently as member of Council his sound judgment and wide experience were made full use of. For some years he was the architect member of the Tribunal of Appeal under the London Building Act, while he will be remembered as Surveyor to the Berners Estate in London, which position he held for many years. He will long be remembered as a very able man whose standard of professional conduct and high sense of honour had won for him the regard of all who knew him. We give some notes of his career on p. 888.

A New Garden Suburb.

THE most promising source of new houses is the energetic Public Utility Society, and it is gratifying to note that a new one of considerable magnitude is to undertake the development of an estate of 123 acres at Streatham. The ordered development associated with such a society is a guarantee that the natural beauties of the area, which is adjacent to Streatham Common, will be considered and safeguarded. The formation of such societies depends upon the driving force of men of energy and determination, and if such men could be persuaded to come forward in other districts, until these societies were the rule rather than the exception, our housing troubles would begin to evaporate.

Women and Housing.

MAY we hope that the very representative meeting of the Women's Housing Associations recently held at Westminster may herald the approach of a wider and saner public attitude towards the solution of our housing difficulties? Politics have been the bane of the past. They have encouraged foolish panaceas, aroused false hopes, provoked suspicion, and favoured delay and exploitation. Women are notoriously free from definite political labels, and they are at the same time strongly susceptible to problems of direct home importance. Ruskin once said that if women combined they could prevent war; this theory may or may not be acceptable, but if they combined they could unquestionably solve the housing problem, or, which would be just as effective, see that it was solved by someone.

THIS TRIBUTE TO
THE GLORIOUS MEMORY
OF SEVEN HUNDRED & FIFTY THREE MEMBERS OF THE JUNIOR ARMY & NAVY CLUB
WHO GAVE THEIR LIVES IN THE CAUSE OF HONOUR LIBERTY & JUSTICE
IN THE GREAT WAR 1914 TO 1918
WAS ERECTED BY THEIR FELLOW-MEMBERS AND THE PROPRIETORS
& DEDICATED BY FIELD-MARSHAL H.R.H. THE DUKE OF CONNAUGHT & STRATHERN K.G.
PATRON OF THE CLUB
30TH JULY 1923

War Memorial Tablet, Junior Army and Navy Club.

Designed by LIEUT.-COL. H. P. CART DE LAFONTAINE, A.R.I.B.A.; Executed by MESSRS. BLUNT & WRAY.

GENERAL NEWS

Oldswinford Church.

The restoration committee and the church council of Oldswinford Church have definitely decided to adopt the scheme for the restoration of the tower and the rebuilding of the nave of the church according to the plans drawn up by Sir Gilbert Scott, R.A.

Change of Address.

The address of the proprietors and editorial office of Concrete Publications, Ltd. (*Concrete and Constructional Engineering*, *The Concrete Year Book*, and "Concrete Series" of books) has been changed to 20, Dartmouth-street, Westminster, S.W.1. (Telephone: Victoria 4581.) The Publishing Office remains at No. 4, Catherine-street, W.C.2.

The Late Sir Thomas Jackson.

The Royal Academy has arranged a memorial service to the late Sir Thomas Jackson, Bart., R.A., on Monday, December 8, at 2.30 p.m., at St. James' Church, Piccadilly.

Glasgow School of Art.

The governors of the Glasgow School of Art have appointed Mr. John D. Revel to be Director of the School, in succession to the late Mr. John Henderson. Mr. Revel is at present headmaster of the Chelsea School of Art, a position he has held for the last twelve years.

Brick-making Industry.

New rates of pay and conditions are to be paid to boys and youths engaged in brick-making in the northern section of England from December 1. According to the arrangement made with the Northern Conciliation Board, the scale is based on the payment to boys 14 years of age of 4½d. per hour, with an increase of a halfpenny at the end of every six months until 21 years old.

Rating and Income Tax.

A very interesting and timely article on the rating of tenements and flats appears in the issue of November 29 of *Rating and Income Tax*. The article is written by Messrs. Albert Crew and W. T. Creswell, Barristers-at-law, and will be of assistance to all who will be engaged in valuation in connection with the forthcoming Quinquennial in London, or in rating generally. Further subjects of interest to property owners in the same issue are an article on the proceedings of the London Assessment Conference in connection with next year's Quinquennial, and an examination of the form of Statutory Form required at previous Quinquennials, a comparison of it with the return being issued for 1925, and a clear indication of the manner in which the form has been modified.

Middlesbrough Technical College.

In 1916 Sir Joseph Constantine presented Middlesbrough with £40,000 to meet the cost of erecting and equipping a technical college. The authorities, however, found that the amount was not nearly sufficient to cover the cost of a really representative college. The widow and family of the late Sir Joseph Constantine, and Mr. William Constantine, senior, have now intimated their willingness to augment the original gift to a maximum, including interest, of £80,000. With the contributions of £10,000 each promised by Messrs. Dorman, Long & Co., Ltd., and Messrs. Bolckow, Vaughan & Co., Ltd., together with other bequests, the committee are in the position, we understand, of being able to invite immediate competitive plans on the original basis, as noted under "Competition News" in our last issue.

South Wales Institute of Architects.

A meeting of the South Wales Institute of Architects and members of the South Wales Builders' Associations were addressed recently, at Cardiff, by Mr. T. Pierson Frank, the Cardiff City Engineer, on "Recent Changes in By-laws Relating to New Streets and Buildings." Mr. J. E. Turner, J.P., F.I.O.B., presided. Mr. Frank dealt with the draft of the new Cardiff by-laws now awaiting sanction of the Ministry of Health, under which are to be permitted several departures in building construction in the matter of walls interdicted before. One clause would permit the construction of arcades. He dealt also with the general advantages obtained in the matter of estate development by the town-planning regulations with regard to new streets.

OBITUARY

We regret to announce the death, at the age of 77, of Mr. John Slater, F.R.I.B.A., Born at Bishops Stortford, Mr. Slater was educated at the Collegiate School, and University College, London. In 1878 he was articled to Professor T. Roger Smith. From 1887–8 he was President of the Architectural Association, and Vice-President of the Royal Institute of British Architects from 1900–4. Mr. Slater was a Member of the Tribunal of Appeal, London Building Acts, and was well known for his activities as an arbitrator. He was responsible for many important business premises, and apart from his numerous lectures found time for a considerable amount of literary work, including A Short History of the Berners Estate, and Classic and Early Christian Architecture, with Professor Roger Smith.

The death of Mr. John William Dennison, of Eastbourne, removes the oldest member on the Rolls of the Royal Institute of British Architects. Mr. Dennison was elected an Associate over sixty years ago and was promoted to the Fellowship fifty-three years ago. He retired from practice in 1899.

We regret to announce the death of Mr. E. J. Kibblewhite, a former editor of *The Building News* and *The English Mechanic*, at the age of 77 years. Mr. Kibblewhite retained his connection with those journals until so recently as September, 1923, when he retired. Mr. Kibblewhite had a lifelong experience of journalism, chiefly in connection with the enterprises of the late Passmore Edwards, and was for many years editor of *The Weekly Times*. He was also one of the founders of the Society of Architects.

MEETINGS

FRIDAY, *December* 5.

Trades Training Schools.—Prize Distribution. At Carpenters' Hall, London Wall, E.C. 7.45 p.m.

MONDAY, *December* 8.

Royal Society of Arts.—Mr. L. C. Martin on "Modern Colour Problems." 18, John-street, W.C.2. 8 p.m.

TUESDAY, *December* 9.

College of Estate Management.—Mr. C. Dalgliesh on "Rating of Special Properties and Public Undertakings." At Lincoln's Inn Fields, W.C.2. 5.30 p.m.

Liverpool Architectural Society.—Mr. J. E. Marshall on "Permanency in Building." At 13, Harrington-street.

Institution of Electrical Engineers.—Mr. T. Hall on "Domestic Application of Electricity." At the Town Hall, Leicester. 6.45 p.m.

THURSDAY, *December* 11.

Architectural Association.—Conversazione. At 34, Bedford-square, W.C.1. 8 p.m.

London Master Builders' Association.—Annual Dinner. At Hotel Cecil, Strand, W.C.2. 7 p.m.

Society of Antiquaries.—Sir Martin Conway on "Present Condition of Works of Art in Russia." At Burlington House, Piccadilly, W.1.

COMPETITION NEWS

Hamilton War Memorial.

THE assessor in this competition, Mr. George A. Paterson, has made the following awards: (1) Mr. T. Harold Hughes, A.R.I.B.A., 27, Ashton-terrace, Glasgow; (2) Mr. W. J. H. Gregory, A.R.I.B.A., 7, Appletree-yard, St. James's-square, London; (3) Messrs. Heiton & McKay, 72, George-street, Perth; (4) Messrs. Orphoot, Whiting & Bryce, 21, Alva-street, Edinburgh. The designs will be exhibited in the Public Library from December 6–13.

Ross-Smith Memorial.

The design of Mr. F. B. Hitch, sculptor, of London, has been accepted in this competition.

Coventry Wall Tablet.

Designs are invited for a wall tablet to be placed in the large hall of the King Henry VIII School, Coventry. Sending-in day, December 31. Full particulars from the Headmaster. (See advertisement this week.)

Leeds Library.

Designs are invited from architects in West Riding only for a library to be erected at the Compton-road estate. Mr Percy S Worthington, F.R.I.B.A., is the assessor; premiums £35, £20, and £15. Conditions, on the payment of £1 1s., from the Town Clerk, Leeds Sending-in day February 16, 1925.

Modern Methods of Ventilation.

For an essay on "The Ventilation of a Police Court," a silver medal will be awarded by the Worshipful Company of Fan Makers. (See our issue for November 28.)

Valletta Lay-out Competition.

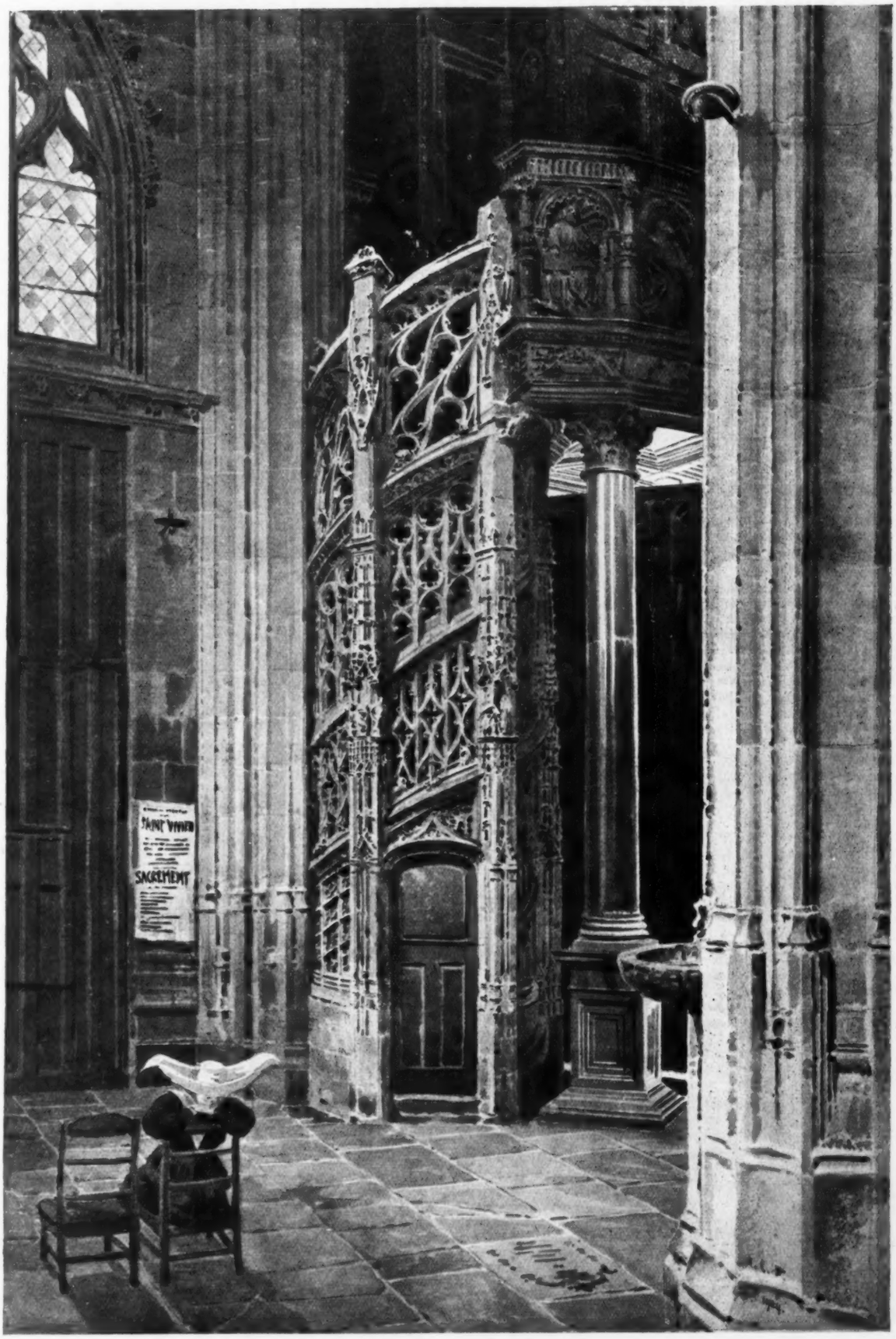
Designs are invited for the lay-out of the open spaces and fortifications between Valletta and Floriana and those encircling Floriana. Applications for particulars, with a deposit of £5, to be made to the Minister of Public Works, Public Works Office, Valletta, Malta, not later than December 1. Premiums of £1,000 and £500 are offered to the first and second competitors respectively. An indemnity of £100 will be awarded to three other designs showing conspicuous merit. Sending-in day, June 30, 1925. Conditions can be seen at this office. The assessors in this competition are Mr. E. P. Warren, F.S.A., F.R.I.B.A., and Professor Patrick Abercrombie, M.A., A.R.I.B.A.

Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Masonic Hall (May 1). Manchester Art Gallery (Feb. 28; Aug. 22). Offices at Nairobi (Feb. 28; Nov. 7). Jugo-Slav Landscape (Dec. 31; Nov. 7). Church at Southport (no sending-in date; Nov. 7). Southend School (Dec. 10; Nov. 14). Argentine Institute for the Blind (Dec. 31, 1925; Nov. 28).

Smoke Abatement.

Representatives of sixty-six local authorities in the Manchester and district town-planning area, following a requirement by the Ministry of Health, met recently in the Manchester Town Hall, under the chairmanship of the ex-Lord Mayor (Alderman W. T. Jackson), to appoint a committee to bring about a uniform administrative system in connection with smoke abatement. Sixteen members were appointed, with the addition of Alderman Jackson as chairman and Dr. Veitch Clark, the Manchester Medical Officer of Health. The Ministry of Health hope that uniformity in regard to penalties and the degree of restrictions will be introduced.



Staircase to Organ, S. Maclou, Rouen.

Sketch by MR. A. C. FARE, A.R.I.B.A.

THE "QUEEN MARGARET" STATUE AT LINCOLN CATHEDRAL

By JOHN L. HODGSON, M.I.Mech.E.

In the following article the writer gives a brief account of Queen Margaret, who was the second wife of Edward I. He also describes a mediæval portrait statue of her, which, owing to its inaccessible position, and to the belief that the head was a reconstruction, has been previously overlooked.

* * * * * *

After the death of Edward's first wife, Eleanor, in 1290, the erection and endowment of the famous Eleanor Crosses (these were used as outdoor preaching places, and also for the distribution of alms according to their several endowments. The records show that they were paid for by Eleanor's executors! The only ones that remain are at Northampton, Geddington, and Waltham) and the other ways of perpetuating her memory which the Church devised, did not for long fill the gap in Edward's life which the loss of a wife's companionship had made. In the words of the monk, Piers of Langtoft:

"His solace all reft, sith she was from him gone,
On fell things he thought, and waxed heavy as lead,
For sadness him o'ermastered, since Eleanor was dead."

We, therefore, find Edward in 1293 corresponding with Philip le Bel, King of France, for the hand of his sister, Blanche la Belle, then aged twenty-two, and reputed to be the most beautiful woman of her time. A treaty was drawn up, whereby Gascony was to be given over for ever in return for her hand. Philip in due course took Gascony. In the meantime, however, he found that it would be possible to marry Blanche to Rudolph of Hapsburg, the eldest son of the Emperor Albert I. He, therefore, proposed that Edward should marry Margaret, the younger sister of Blanche, who was then a mere girl of thirteen.

Edward immediately went to war, and it was not until 1298 that any pacific arrangement was come to between him and the French King. Peace was facilitated by the fact that while Edward and Philip fought, Margaret grew up, and gave promise of even greater beauty and grace than her famous sister Blanche. In his chronicle, Piers describes her as

"Dame Marguerite, good withouten lack."

It was thus that on September 9, 1299, Margaret was married to Edward in Canterbury Cathedral by Robert of Winchelsea; she being in her eighteenth and Edward in his sixty-second year. There was no time for the new Queen to be crowned, as within a week, Edward, in spite of the opposition of his barons, started on his third campaign against the Scots, who were recovering from the defeat he had inflicted upon them at Falkirk in 1298.

During his absence in Scotland, Margaret resided at the Tower. She was practically under quarantine; as smallpox, brought back by Edward's men from his crusade in Syria, was ravaging the city of London. After this first summer, Margaret either accompanied Edward on his campaigns against the Scots, or, when this was too dangerous, kept court in one of the northern counties, notably at Cawood Castle, near York. Always a keen sportswoman, her first son, Thomas, was born at a house in Brotherton while she was away from Cawood following the chase in the forest which then lined the banks of the Wharfe. In the winter, 1305-1306, there were, following upon the execution of Wallace and the apparent subjugation of the Scots, great festivities at Westminster, in which the young Queen joined.

Margaret and Edward spent Christmas and the early part of 1307 with the monks at Lanercost Priory, near Carlisle. Edward, who was then seventy years of age, was very sick and infirm, being exhausted by his strenuous campaigns. In July, 1307, he commenced his seventh and last campaign against the Scots, who had again risen under Bruce. Five days after leaving Carlisle, he died at Burgh-on-Sands.

From the records it is quite apparent that, in spite of the disparity in their years, Margaret loved and understood this greatest of the English kings, who had called the first real Parliament, and whose statesmanlike policy had had for its aim the unification of political power throughout the island.

In her early widowhood, she wrote: "At the foot of Edward's monument, with my little sons, I weep and call upon him. When Edward died, all men died for me." (John O'London's Chronicle.)

Three-quarter View of Head and Bust.
(Note the sensitive modelling of the mouth and chin.)

Margaret survived Edward by only ten years. She died at Marlborough Castle, on the border of Savernake Forest, at the early age of 36, and was buried in the Church of the Grey Friars, near Newgate, of which she was one of the founders. (She began the choir in 1306, and finished it during her widowhood.)

The English chroniclers relate nothing but good of her. She frequently tempered the King's harsh judgments; notably in the case of the city of Winchester, whose charters Edward had forfeited. At times, when she felt her own unaided skill might fail, she would send her young children to plead the cause she had espoused. While she lived, she was an influence for good in the unhappy lives of Edward II and Isabella his queen.

Such is a brief account of Queen Margaret and the troublous times in which she lived.

* * * * * *

The writer recently, after an absence of some twenty-five years, re-visited Lincoln Cathedral, which he had known and loved as a schoolboy. While at Lincoln, he came across a photograph of the statue, that, according to tradition, represents Queen Margaret. This statue, which is in a niche on the right-hand side of the south, or "Judgment" porch of the cathedral, and level with the roof of the Russell Chapel, can only be imperfectly seen from the ground. According to various guide-books, and also to Messrs. Prior & Gardner, whose book is the accepted authority on mediæval figure sculpture, the head of the statue has been restored, and the figure is of no great interest.

The photograph above referred to, which was taken from the roof of the Russell Chapel when some scaffolding was erected in 1908, seemed to the writer to reveal a very different state of things. The amount of weathering of the head could be seen to be about equal to that of the lower part of the figure, and this could be definitely dated as being prior to 1480 by the chisel marks of the mason who had hacked part of it away in order to put the last battlement of the chapel into place.

Further, the treatment of the head showed several strange features, such as the bent-out ears, which were not likely to have been invented by a nineteenth-century renovator; and the whole texture of its composition was such as only the late thirteenth or early fourteenth century could have produced. The statue, in its grace of pose, and the vigour and freedom of its treatment (usually the mediæval sculptor had no freedom at all when filling in important spaces; he had to design set figures, or groups of figures, for the instruction and edification of an unlettered public, all the main features and accessories of which were carefully specified by his employers, the priests), seemed to be an amazing piece of work, even for the period 1290-1310, to which it obviously belonged. The writer, therefore, approached Dean Fry for permission to take photographs and make drawings and measured sections of the statue, and also to copy the head. This request having been granted at a meeting of the Chapter, the necessary scaffolding was erected at the beginning of September last. The accompanying photographs, which were taken for the writer by Mr. S. Smith, the official cathedral photographer (who took the original photograph in 1908), show the beauty of the statue, and the dignity and poise of the queenly woman who inspired it.

That the statue is a portrait the writer has little doubt. Careful measurements of the face show that the eyes are not of the same size, that the ears are not at the same level, that the left corner of the mouth is higher than the right, and so on. Such idiosyncrasies are not to be found in idealised or imagined faces. But in a subtle way they give character and interest to the living face, as every skilled portrait-painter and sculptor knows. The statue is carved in Lincoln oolite stone from the "Silver Bed" layer. It is 6 ft. 2 in. high—the exact height of Edward I himself. It represents the Queen standing with her left foot advanced, carrying the train of her cloak over her right arm, and holding in her much weathered right hand something that was probably a scarf or gloves or the tassel of her cloak. Her headdress is ornamented with a trefoil pattern, which is still visible at the corners. Except that the hands are too small, as was customary in the statues of the period, the figure is in correct proportion.

Although intended to be viewed from below, the clumsy device of making the head and shoulders unduly large, adopted by Giotto and the Florentine sculptors in similar cases, has not been used. The necessary effect has been obtained by a natural inclination forward of the head. The statue is not symmetrical about any centre line. Yet it fills its symmetrical niche with perfect harmony. It is beautiful when viewed from all positions, and in almost all lights. In certain aspects the face has a serenity that reminds one of the great Egyptian statues. This is mainly due to the extremely sensitive modelling of the mouth and chin. Like Donatello, and also

like many of the ancient Egyptian sculptors, the creator of the Queen Margaret Statue realised that the greatest results could be obtained by concentrating on the mouth and chin, rather than upon any other features. As a piece of carving it is a "miracle in stone." The draperies are "alive" with subtle folds and creases. In some parts those that hang over the right hand and arm, are not more than half an inch thick! The lower draperies are undercut upwards for more than six inches!

At first sight the design would appear to be too delicate for a stone figure which was to be exposed for centuries to wind and rain on the exterior of a building. Closer examination, however, shows the consummate craftsmanship of the sculptor. The head and face are protected from the rain by the forward bend. The thin portions of the drapery are vertical and drain quickly; a few short lengths of these are the only parts of the statue that have been restored. We, therefore, find that after six hundred years of exposure it is only the hands and the lower parts of the draperies, where the water has clung and the frost has penetrated, which are appreciably damaged.

Produced at the very zenith of achievement of Gothic craftsmanship, the Queen Margaret Statue is possibly the finest and most perfect example of mediæval portrait sculpture left in Europe. The name of the sculptor has not yet been ascertained, though search is being made for it by examining the records of payments made in the early part of Edward II's reign, and in similar ways. The sculptor might well prove to be Alexander of Abingdon, who was responsible for the Eleanor figures on the Waltham Cross.

Two other statues, which are obviously by the same hand, still exist at Lincoln. These are the well-known figures of Edward and Eleanor, which are to be found in the next niche to the Queen Margaret Statue. The figure of Eleanor has been largely restored,

Profile of Head.
(With background blocked out.)

and is, in consequence, of little interest. The lower draperies of the Edward figure are, however, still untouched except by time. It is probable that all three statues were planned during the respite from the Scottish wars (1305-1307), and that Queen Margaret herself supervised their making.

The builder of the Russell Chapel, who, less than two hundred years after the Queen Margaret Statue was hauled into place, hacked part of it away, must not be judged too harshly. There were plenty of mediæval statues in his time! Moreover, individual statues, however fine, were not greatly treasured by men who felt that they could still create even better statues at their will. For us the case is far different. The conditions under which the great mediæval statues were created have disappeared, never to return; while at the same time considerably less than one per cent. of the work of the mediæval figure sculptors still survives. It would, therefore, seem desirable that the Queen Margaret Statue should be removed from its exposed position, where it is gradually being disintegrated by the acid and frost-laden air of the east winds, and where its exceptional beauty has remained unnoticed and unappreciated so long, and brought within the shelter of the cathedral.

The writer found Dean Fry quite in sympathy with this point of view, and he tentatively discussed with him the possibility of the removal of the statue to a specially prepared niche at the back of the altar screen in the Angel Choir. If this suggestion, after due consideration, is ultimately carried out, the Queen Margaret Statue will be placed in a setting which, though in many respects less advantageous than its present one, will be worthy even of its quite unusual grace and beauty.

The Royal Sanitary Institute.

Acting on the advice of the adjudicators, the Council of the Royal Sanitary Institute has awarded the Henry Saxon Snell prize of fifty guineas and the silver medal of the Institute to Mr. E. Thomas Swinson, M.R.San.I. (Feltham), writing under the motto "Cave Dweller." Two of the other essays showed considerable merit, and the Council has decided to recognise this by making a supplementary award of a Bronze Medal of the Institute, to each of the writers, Mr. Edward E. Barks, A.R.I.B.A. (London), writing under the motto "Agenda Pro Bono Publico," and Mr. F. R. Jelley (Sutton), writing under the motto, "Plebs."

Front View of Upper Part of Figure.
(Note the fifteenth-century chisel marks just below the right hand.)

Side View of Complete Figure.
(Taken from specially erected platform.)

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Craftsmanship and Architects.

SIR,—I can well understand your zeal in furthering so excellent and timely a proposal as this; therefore you naturally devoted to it the opening "Note" for the week in the last issue of *The Builder*, thus giving your warm support to a long-desired movement started with the approval of the Council of the Royal Institute of British Architects on the recommendation of the Art Standing Committee. An additional Committee at Conduit-street is intended to institute immediately a scheme for the co-ordination of craftsmanship in relation to Architecture. This really amounts to a revival of methods often advocated half a century ago by such masters as Wm. Butterfield, Wm. Burges, E. W. Godwin, Eden Nesfield, Norman Shaw, G. F. Bodley, G. E. Street, Thomas G. Jackson, J. L. Pearson, Philip Webb and Mr. Basil Champneys. That this revival should emerge immediately after the recent amalgamation of the Society of Architects with the R.I.B.A. is a remarkable fact which cannot fail to furnish a highly pleasurable surprise to those who live to recall, as I do, the formation of this Society. The "Whirligig of Time" inevitably "works wonders." The founders of the Society no doubt set out with the sole intention of promoting "Registration," but in order to gain support in the initial stages not a few were induced to believe that the Arts and Crafts would be also incorporated on practical lines. Thus, at the outset, my friends, J. M. Brydon and J. D. Sedding, with others of their school, began to participate in the hope that such an idea might materialise. They induced me to attend the inaugural meeting of the Society, held in the Council Chamber of the Strand Board of Works, in Tavistock-street. We speedily realised, however, that the majority cared nothing about the applied arts and the pioneers fundamentally differed from our views and objects, consequently J. M. Brydon and his mistaken, or misled, supporters naturally felt that the "subsequent proceedings interested them no more," so accordingly withdrew. I never attended any other meeting. I do not wish to decry "Registration," for which the Society has done so much. Circumstances no doubt have changed; therefore, bowing to the wishes of the vast majority of architects in this country, I voted in support of the unified scheme adopted last July by the splendid gathering held at Caxton Hall, Westminster. I rejoice that amalgamation has been accomplished in the interests of the profession as a whole, but I reckon that by encouraging the Arts allied to building in the way now proposed the Art of Architecture will assuredly make greater headway and, I hope, become worthy of our advantages and enormous opportunities. I have no doubt about the ultimate success of the project if properly handled. The experience of the ages is in evidence, hence my assurance.

MAURICE B. ADAMS (F.R.I.B.A.).

Bedford Park.

British Confederation of Arts.

SIR,—The Organising Council of the British Confederation of Arts has become aware of the existence of an exhibition, namely, the International Exhibition of Decorative Arts, Paris, 1925, and wishes to make it public to the general body of artists. The exhibition is being purely organised to show what the world has done since the war in specifically modern art—not in date but in spirit. The Organising Council of the British Confederation of Arts some time ago asked for wider representation of artists on the Fine Arts Commission, and now demands wider representation upon the Committee handling this Exhibition. The Organising Council is a centre for organised action on the part of all types of Art Societies. The Fine Arts Commission is a body of individuals which, although of high standing, must represent the individual outlook and not the collective outlook. Therefore, the British Confederation of Arts is the right organ to assist the Exhibition Committee and the Fine Arts Commission in determining the national policy to be pursued in arriving at a thoroughly representative British show at this all important exhibition. The Organising Council of the British Confederation of Arts would influence artists to depart from their usual unpatriotic custom on these occasions and encourage them this time to have the patriotism to send their finest and latest work to bring credit to the British section.

A. SEDGWICK, *Honorary Secretary.*

Assessing Competitions.

SIR,—I beg a little space in your columns to protest against the ridiculous time taken by some assessors in settling small competitions. In a recent case, the money to be spent was less than £2,000, and yet more than two months were taken to come to a decision.

The smaller the competition the longer would appear to be the time required to assess it. Sir Edwin Cooper, I think, set a good example to some assessors by settling a big competition within a fortnight. Competitors are placed at a disadvantage as they cannot write to the promoters owing to the risk of being disqualified. I believe a lot of competitors would join me in this protest. "COMPETITOR."

Northumberland War Memorial.

The memorial to the men of the 6th (Territorial) Battalion Northumberland Fusiliers was recently unveiled at Newcastle by Major-General Sir P. S. Wilkinson, K.C.M.G. The bronze is the work of Mr. J. M. W. Reid, A.R.C.A., Master of Sculpture, King Edward VII School of Art, Armstrong College, and the architects for the work are Messrs. Cackett & Burns Dick, Newcastle.

Old Farm near Lisieux, France. Sketch by MR. A. C. FARE, A.R.I.B.A.

THE EFFECTS ON BUILDINGS OF THE JAPANESE EARTHQUAKE OF 1923

By CHARLES DAVISON, F.G.S.

The effects on buildings of the great Japanese earthquake of September 1, 1923, have been described in two papers recently published. Professor A. Imamura has written a valuable preliminary report on the earthquake in general,* and Mr. H. M. Hadley has studied the effects of the shock on different types of buildings.† The tables given by Professor Imamura show how slight was the damage actually caused by the shock itself in the two chief cities. In Yokohama, 12.4 per cent., and in Tokyo less than 1 per cent., of the houses collapsed completely. In the towns and villages along the low-lying earthy shores of Sagami Bay the figures were much higher, reaching 95.5 per cent. at Arima and Tateno, 96.7 per cent. at Hodyo and Nago, and 97.8 per cent. at Simosoga. Mr. K. Suda has examined the effects of the site on the distribution of the damage.‡ His main result is that the intensity of the shock depends for the most part on the nature of the ground. As an example, he refers to three villages (Yamada, Kasukabe, and Yamanaka) which are built on alluvium. In each of them more than 60 per cent. of the houses were entirely destroyed, while houses in the surrounding district, built on harder ground, were practically undamaged.

Mr. Hadley's brief paper is of great interest. He has examined hundreds of buildings that stood uninjured and hundreds of others that were damaged or had collapsed. In Tokyo and Yokohama the buildings were constructed of various materials, wooden structures of the light Japanese type predominating. Brick was used in buildings up to four stories in height, reinforced concrete for others up to one hundred feet high, and, more recently, steel has been used in the largest buildings also limited to the latter height. "Whatever the material of construction," says Mr. Hadley, "the undamaged building was the one so framed and braced that it moved bodily as a block or unit with its foundations when these foundations were moved by the irresistible force of the seismic waves. Whatever the material of construction, increasing damage, up to the state of complete collapse, was proportional to lack of lateral strength and rigidity. Whether the lateral strength and rigidity was secured by trussing, frame action, or by the use of adequate wall construction, was immaterial."

At the time of the earthquake there were sixteen large steel-framed buildings in Tokyo. Six of them were uninjured, the rest were more or less severely damaged. The former were preserved by their complete or extensive use of reinforced concrete wall construction, which stiffened and braced them. In the latter, material was used for their wall construction that was deficient in tensile strength, and afforded little or no stiffening to their steel frame. "Such buildings swayed violently and had their exterior and court walls shattered and broken, interior partitions cracked and broken, plastering destroyed, marble trim shaken down and broken, elevators damaged, etc." In houses built of reinforced concrete lateral strength and rigidity were possessed by those undamaged, and reinforced concrete at the corners of buildings was sufficient to protect them from damage. Of brick buildings, those which escaped had heavy exterior and division walls well tied together. The behaviour of wooden buildings was the same as that of the others; when adequately braced they were uninjured, otherwise they collapsed. After two months' investigation Mr. Hadley concludes that "earthquake-proof construction could be secured with any material, but that safest and most economical results could be obtained with structural steel or reinforced concrete, both embodying an adequate amount of reinforced wall construction."

* Imp. Earthq. Inves. Com., Seismol. Notes, No. 6, 1924, pp. 1-22.
† Bull. Seismol. Soc. of America, vol. 14, 1924, pp. 6-8.
‡ Mem. of the Marine Obs., Kobe, Japan, vol. 1, 1924, pp. 137-269.

ROYAL INSTITUTE OF BRITISH ARCHITECTS

We take the following notes from the Minutes of the Council Meeting held on November 17:—

Architectural Copyright.—On the recommendation of the Practice Standing Committee, it was decided to inform the Board of Trade, in reply to the Board's request for the observations of the R.I.B.A. as to the desirability or otherwise of introducing legislation for the purpose of setting up a Statutory Register of Copyright, that in the opinion of the Council it is desirable that legislation should be introduced for the purpose of setting up a Statutory Register of Copyright, provided that assurances are obtained that the rights granted under the Copyright Act of 1911 are not affected in any way.

Richmond Bridge.—Reports were received from the Art Standing Committee and the Town-Planning Committee on the subject of the proposed widening of Richmond Bridge, and it was decided to take steps to call the attention of the authorities concerned to the undesirability of widening the Bridge and the necessity of a broad consideration of the whole question of new bridges over the Thames outside the County of London.

British Architects' Conference, 1925.—On the recommendation of the Allied Societies' Conference the offer of the Northern Architectural Association to organise the Conference in their province in 1925 was cordially accepted.

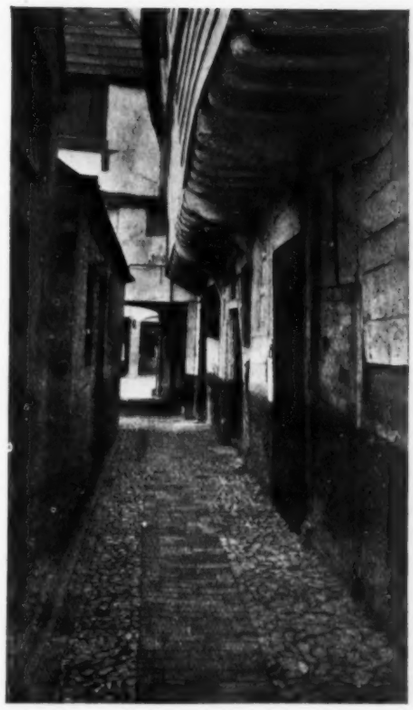
Housing Fees Tribunal.—The Tribunal presented its final report on its work since its appointment in 1922, and in releasing the Tribunal from its duties the Council passed a very cordial vote of thanks to the members of the Tribunal for their indefatigable and successful labours in the interests of the profession.

RECORDS IN STONE

Sir Banister Fletcher, F.R.I.B.A., lectured recently at the Central School of Arts and Crafts on the subject of Romanesque architecture in France, preceding the great cathedral-building or Gothic epoch. He described how Romanesque architecture, indirectly derived from Roman, evolved a series of different constructive expedients in different parts of the country, and eventually produced the Gothic style, first in the north. These ancient churches showed the intertwined histories of English and French kings, when much of France belonged to England, and there were many architectural exchanges. France, said the lecturer, had not the marble of Italy, but good building stone, and had great vivacity and inventiveness. The great dividing line between peoples and styles was the Loire, and vaults and domes in the south against the usurping arches and concentrated thrusts of the north showed how the latter style, from its distance from Roman influence, grew more progressive in spirit, and led up to the building genius of the "Ile de France."

Bethlem Hospital.

The City of London Corporation recently considered the question of the removal of the Royal Hospital of Bethlem from its present site in Lambeth. A new site has been found by the Governors at Monks Orchard Estate, near Eden Park, Croydon. The freehold is to be transferred to the Corporation and will be leased to the Governors at a nominal rental. The freehold of the existing site at Lambeth, at present the property of the Corporation, will be conveyed to the Governors. The new site at Eden Park is to cost approximately £33,000.



Bull Inn Yard, Ludlow.

URBAN AMENITY

In his eighth lecture on Town Planning, at Birmingham University, Mr. William Haywood, F.R.I.B.A., said of the several factors which contributed to amenity in the material condition of towns—other than beauty of situation—a consistent scale and manner were most important and most difficult to secure. Consistency of general effect was sometimes attempted by the imposition of a uniform style of building; sometimes reliance was placed upon one-man control as a means for securing the necessary cohesion. These methods, however, could only result in a consistency of mediocrity, with no prospect of any distinction of manner unless handled with genius; and in that case, too, they must still fail in representative character. In these days, the true source of urban amenity was in the disposition of the populace, and was best moved by the stirring of many minds toward a high standard of general excellence.

Towns which had become large only by the multiplication of small parts would usually be deficient in a scale appropriate to their new size. They had provincial towns in England of an importance, population and wealth, which, for adequate expression, required an almost metropolitan character in their equipment; yet they remained so ill provided with civic and social accommodation proportioned to their condition that their people appeared unsuited to the larger life that the growth of their environment had made possible.

The value of amenity in towns could be most effectively demonstrated by the great building periods of the past, when beauty was thought to be as essential a factor in city life, as convenient and rapid transit facilities were to-day. But while the past might stimulate by example, it could not properly serve as a model. Modern towns which sought to give their growth an appropriate expression, must effect this by an imaginative treatment of their own vital energies. Industry and its equipment had much potential beauty; and the predominate occupation of all towns, whether it be industry or not, should be regarded as an essential factor in the determination of an amenity suitable to local conditions.

LEEDS ARCHITECTURAL SOCIETY

MR. W. ALBAN JONES recently gave his Presidential Address before this Society. In the course of his remarks Mr. Jones said the improved tastes displayed by modern business firms, as compared with thirty years ago, rendered it highly probable that the architecture of the proposed new street improvement from the Leeds Town Hall to Vicar-lane would be much superior to that of the last improvement in Briggate, which cleared away the old Shambles. The vista of this proposed new street with the Town Hall as the dominating focal point at one end, held out an alluring prospect to architects.

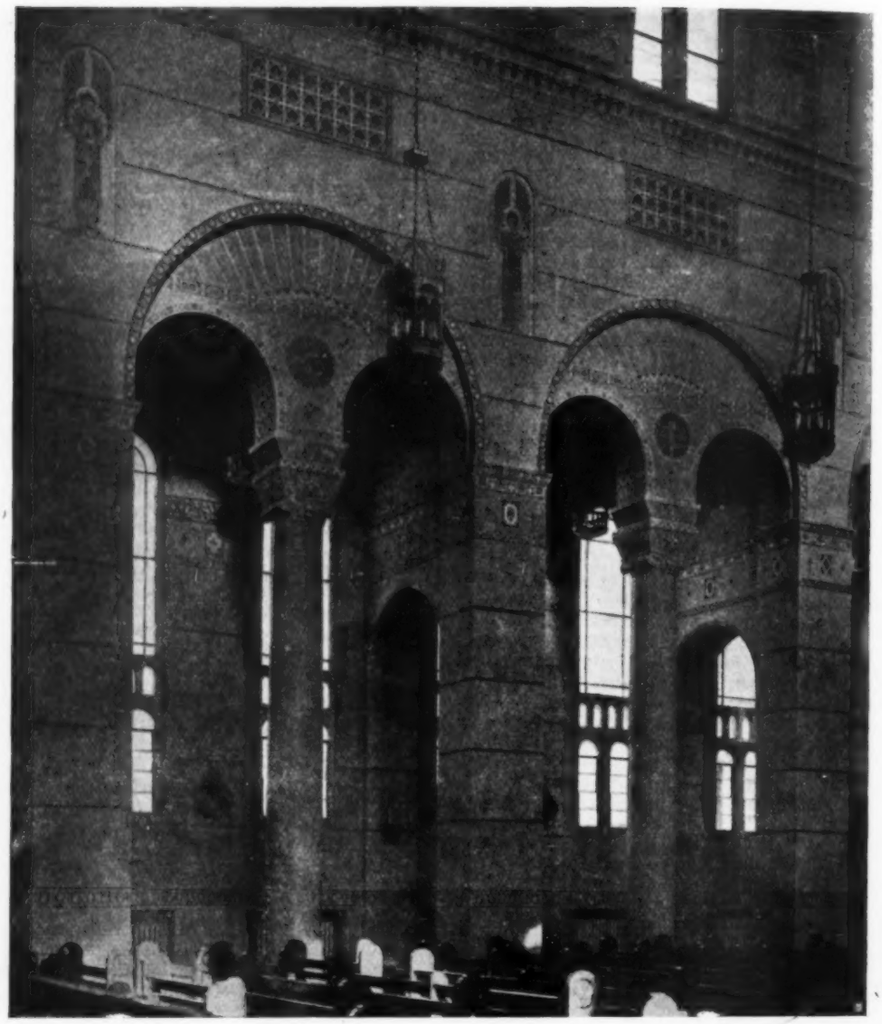
With regard to State housing, Mr. Jones said the hectic period under the 1919 Act was now about over. Architects, for the first time in history, were largely employed under this Act, and if the actual part they took in it was more widely known to the public they would at any rate absolve them. Architects were the only body who met Dr. Addison before prices soared so high, and agreed beforehand on a reasonable scale of payment, to which they faithfully kept, except for a few isolated cases, which they deplored, where previous agreements had been made. One had only to reflect for a moment to realise what a totally different result the Act might have had if contractors and trade unions had followed the architects' example and agreed upon a reasonable fixed rate for their services.

Under this fixed scale, the architect's fee, even on the £1,100 house, worked out to about £20 per house, so that if this had been eliminated entirely it would have made little difference to the financial disaster.

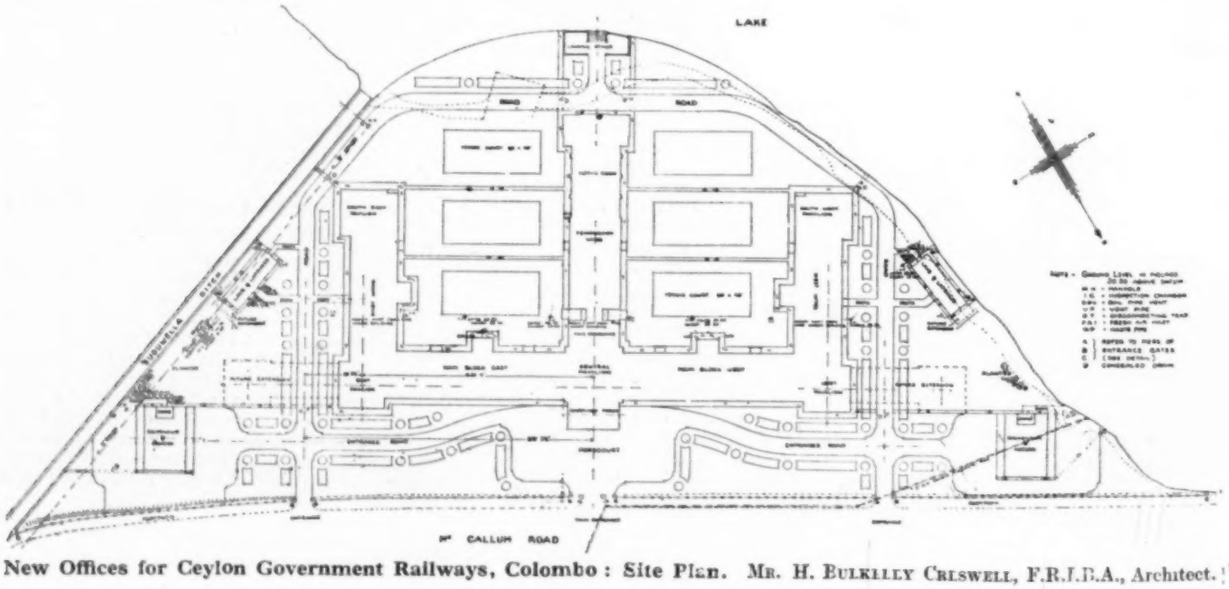
The whole of the accounts for the Leeds Corporation houses were not yet available, but they knew that the cost would work out very much below the national average of £1,100 each. He predicted that the local average would be nearer £900 for those built by competitive tenders obtained under Leeds architects. By far the cheapest houses built in Leeds under the Addison Act were those for which competitive tenders were obtained under architects and to their special plans, at £308 per house plus cost of land with roads and sewers.

In reference to the new Act, Mr. Jones said it was in the reaction from the extravagance of the Addison Act that the chief danger lay of an extremely ugly countryside. Last May he attended at Whitehall as President of the Society, forming one of a deputation to urge upon the late Minister of Health the advisability of architects functioning in further housing schemes. Briefly put, he gathered that they were talking to the converted at Whitehall, but as these matters were to be left largely in the hands of local authorities, their best plan was to convince them. He knew of no better service to architecture at the present time than so convincing local authorities.

So great was the hunger of the nation for houses that it had lost all niceties in its appetite, and if cast-iron houses for Robots proved an economic proposition, æsthetic objections were of no avail. The only convincing arguments must be on the economic side. They must strive to prove that architects could function as savers of the public purse rather than spenders. The less funds for disposal the more need for a skilled architect,



Church of the Sacred Heart, Washington. MESSRS. MURPHY & ELMSTEAD, Architects.
[An all-concrete church.]



New Offices for Ceylon Government Railways, Colombo: Site Plan. MR. H. BULKELLY CRESWELL, F.R.I.B.A., Architect.

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ILLUSTRATIONS

New Railway Offices, Colombo.

This building is to accommodate the central staff of the Ceylon Government Railways, the several departments of which are now dispersed through a number of scattered buildings. The site is a level and open promontory jutting into the larger of the two lakes which lie behind Colombo Harbour, from which they are accessible by locks and are therefore not tidal. On the opposite side of McCallum-road, upon which the building fronts, lie the extensive sidings, stores, goods sheds and loco. and carriage shops of the railway.

The new building is conspicuous from distant views in several directions, and is not a central public building. This consideration has led to broad emphasis in the general lines and large scale in the parts of a design which has sought to combine the tradition of Western Europe with indigenous forms.

The entrance block and pavilions and dressings are of concrete, ashlar faced in the mould with granolithic and washed down while still green to bring out the grain and give a surface texture. The main wall face of connecting blocks is finished in stucco on brickwork. The constructional system is armoured concrete. The architect is Mr. H. B. Creswell, working in collaboration with Mr. D. McMillan, Engineer of Ways and Works, Ceylon Government Railways, under whose direction the building is being erected.

House on St. George's Hill, Weybridge.

This house, designed by Mr. E. Stanley Hall, F.R.I.B.A., is built of mottled stock bricks, with red quoins to the windows, and the roof is of tiles. The windows are steel casements with leaded lights, hung in oak frames. The ground floor contains sitting hall, dining and drawing rooms, and study. All the sitting rooms and hall have mahogany doors and oak floors. On the first floor there are five bedrooms and two bath rooms, with a butler's bedroom off the back stairs. On the second floor are three bedrooms, one bath room, and a box room. The garage is situated on the north-east side of the house. There is a terrace at the back and west side of the house, and below the south terrace is a long bowling lawn The tennis court is on a sunk lawn on the west of the house. The whole of the work is being carried out by Messrs. W. G. Tarrant, Ltd., of Byfleet.

New Office Building.

The clerk of the works for this building, at 50–64, Broadway, is Mr. John Warlow, and not as stated in our last issue.

Concrete Church.

We give this week two interior views and a detail of ornament of the Church of the Sacred Heart, Washington, which has been built entirely of concrete. In this building a great deal of experimental work in the surface treatment of concrete was carried out by Mr. John J. Ealey, who, in a recent interview, said: "Architectural sculptors have for years struggled against the suppression of their art by increasing costs of executing designs in permanent materials. Some years ago it became clear to me that the economy which would again permit the freedom of design which existed before industry took the profession of skilled workmen from the arts would rest upon new principles. My attention was attracted to concrete as a medium of artistic expression, and the culmination of my efforts in this direction is the work on the interior of the Church of the Sacred Heart." The whole of the interior decoration is in bare concrete, in colours obtained by using different coloured aggregates and scrubbing the film of cement from the surface after the formwork was removed. The shape of the decorative details was obtained by the design of the formwork Messrs. Murphy & Olmstead are the architects.

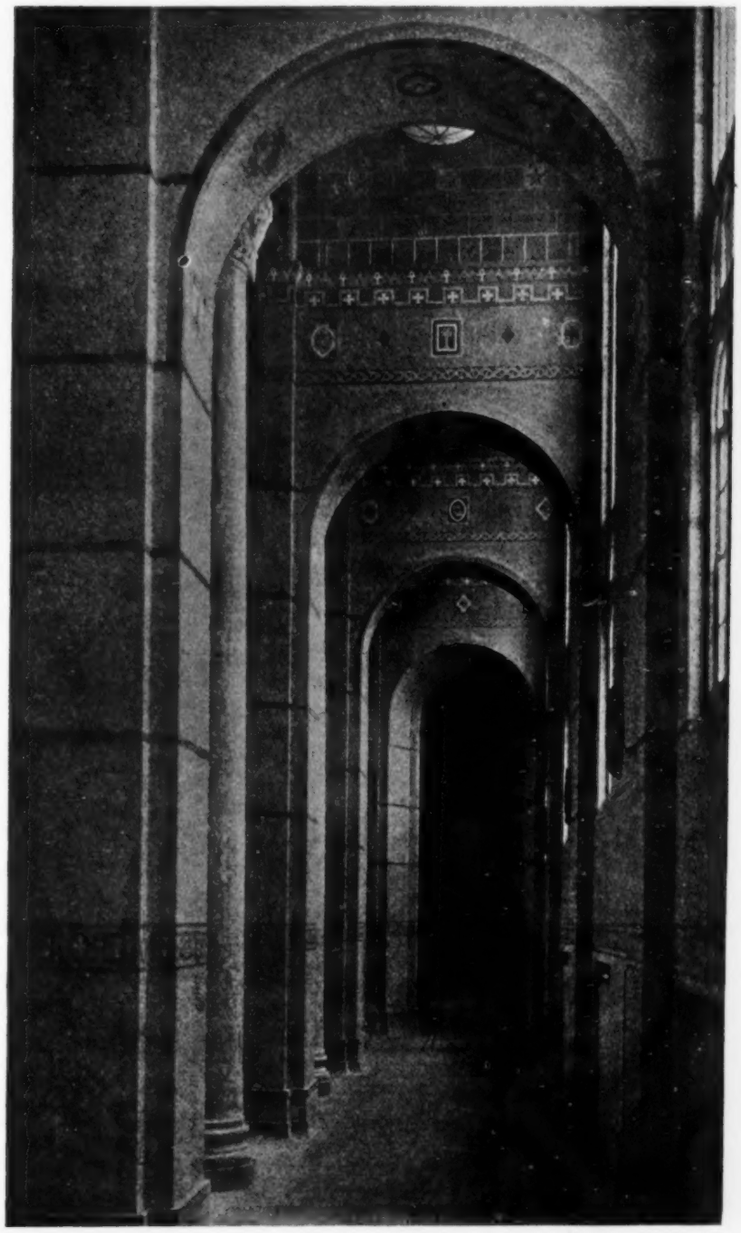
Church House, Newtown.

The Church House at Newtown has been built as a war memorial. The building is faced with rustic bricks and grey terra-cotta dressings, having a combed face.

The building contractors are Messrs. Treasure & Son, Ltd., of Shrewsbury; the heating engineers are the Paragon Heating Co., of Birmingham. Mr. G. T. Bassett, A.R.I.B.A., is the architect.

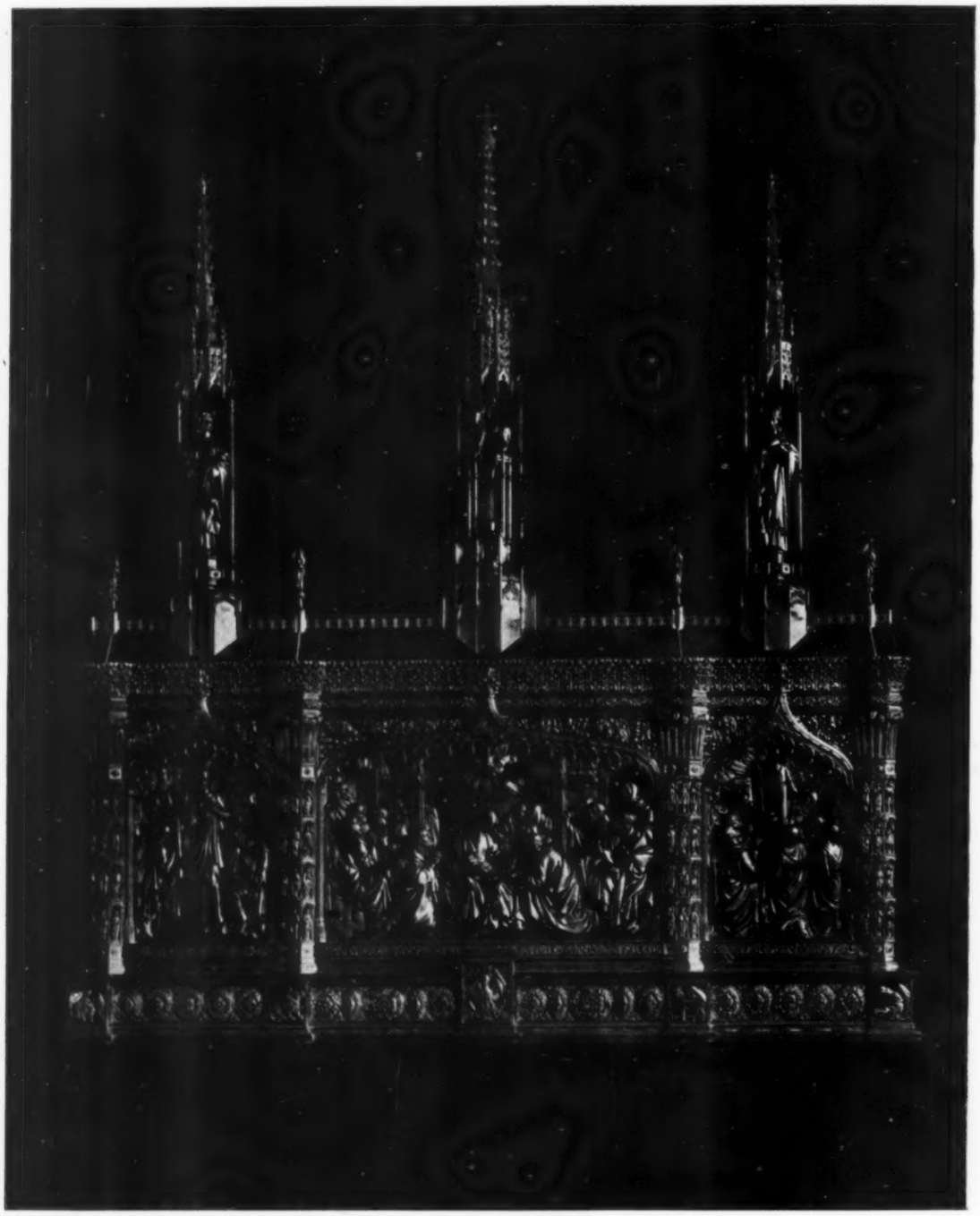
St. Bride's Memorial.

A memorial to Thomas Weelkes, organist of Chichester Cathedral, who died in 1623, was recently unveiled in St. Bride's Church, Fleet-street, and dedicated by the Rev. Lewis Gilbertson, president of the Madrigal Society. The memorial is in bronze by Mr. P. G. Bentham, A.R.B.S., from a design by Professor A. E. Richardson (Messrs. Richardson & Gill, architects to St. Bride's), and is illustrated on p. 886.



Church of the Sacred Heart, Washington: One of the Side Aisles.

MESSRS. MURPHY & ELMSTEAD, Architects.



The Silver Reredos for the Lady Chapel of Saint Mark's Church, Philadelphia.

Designed by MR. WALTER STOYE.

[This silver reredos has been designed to form, with the altar, the central feature of the interior of the Lady Chapel. The decorative detail, although all original work, has been designed to harmonise in character with the altar and the chapel building. The whole work is carried out in solid silver with the exception of the Agnus Dei, which is made of solid gold, and the various jewels, consisting of sapphires, rubies, tourmalines, pearls, amethysts, topaz, chrysoprase, some six hundred in number, are also set in gold. The reredos measures in its main lines 6 ft. 9 in. from side to side and 10 ft. 11¾ in. from the base to the top of the central pinnacle. The three pinnacles correspond to the mullions of the window immediately behind and are arranged so as not to interfere with the stained glass. The work was carried out by Messrs. Barkentin & Krall, Ltd., of London, who have been engaged on the work for two years.]

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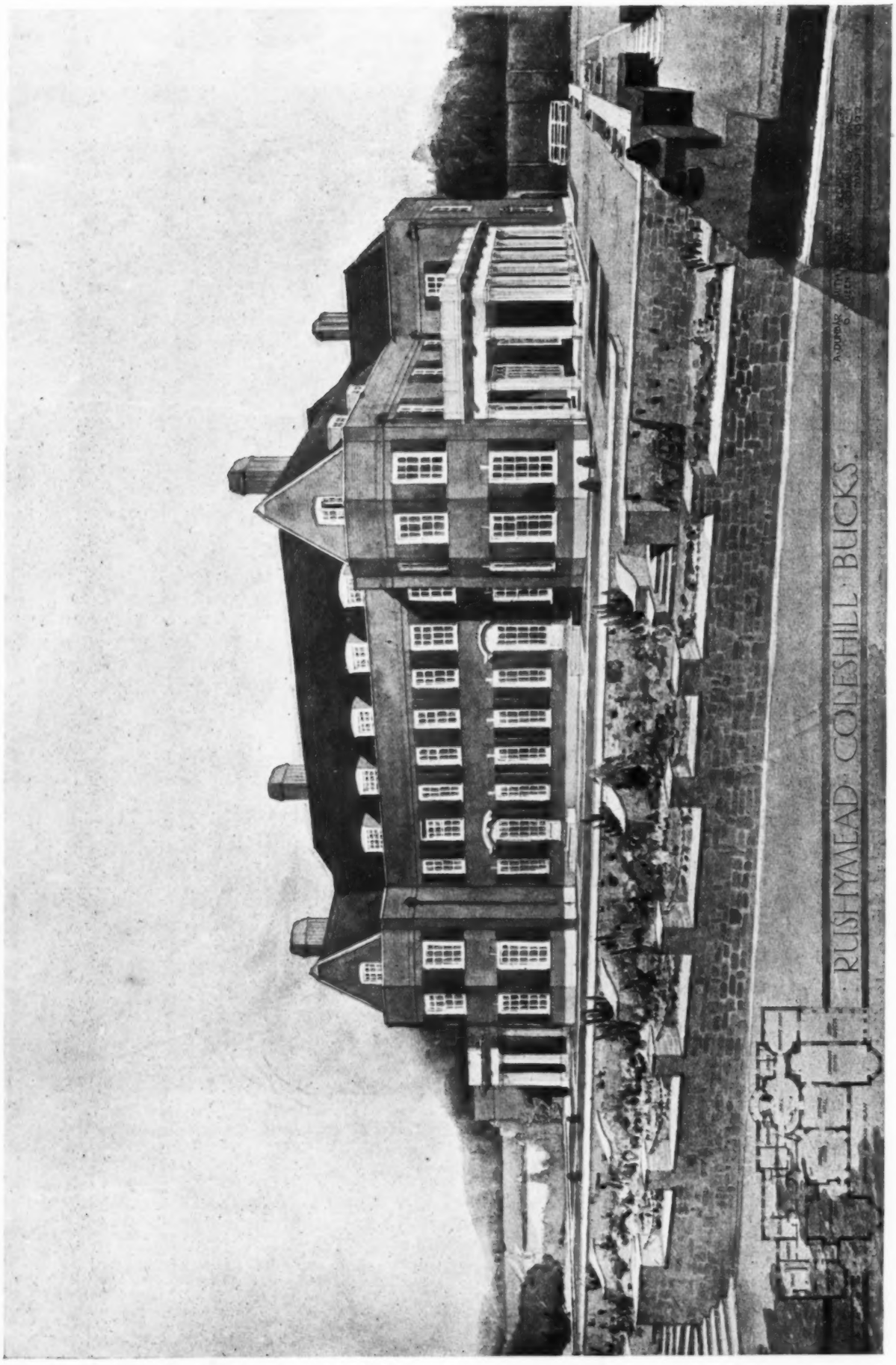

Rushymead, Coleshill, Bucks. Messrs. A. Dunbar Smith, F.R.I.B.A., and Cecil Brewer, Architects.

Rushymead, Coleshill, Bucks. Messrs. A. Dunbar Smith, F.R.I.B.A., and Cecil Brewer, Architects.

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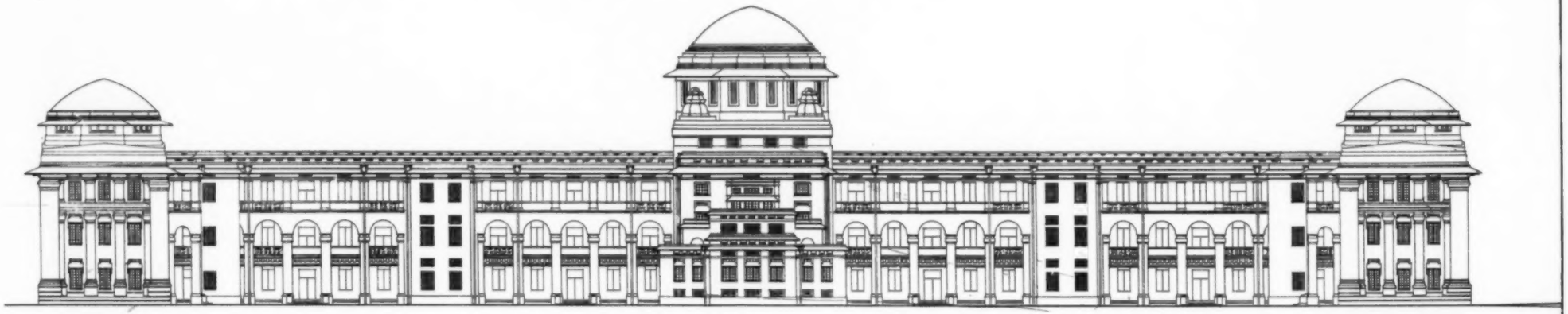
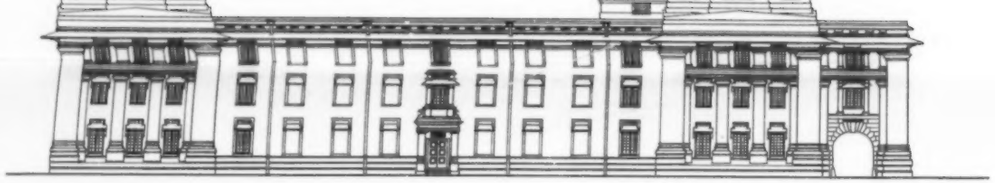
ELEVATION TO Mc CALLUM ROAD.

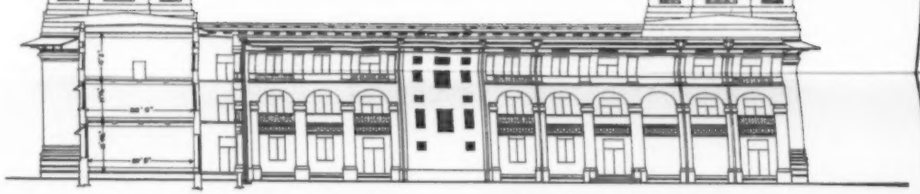


ELEVATION TO LAKE.

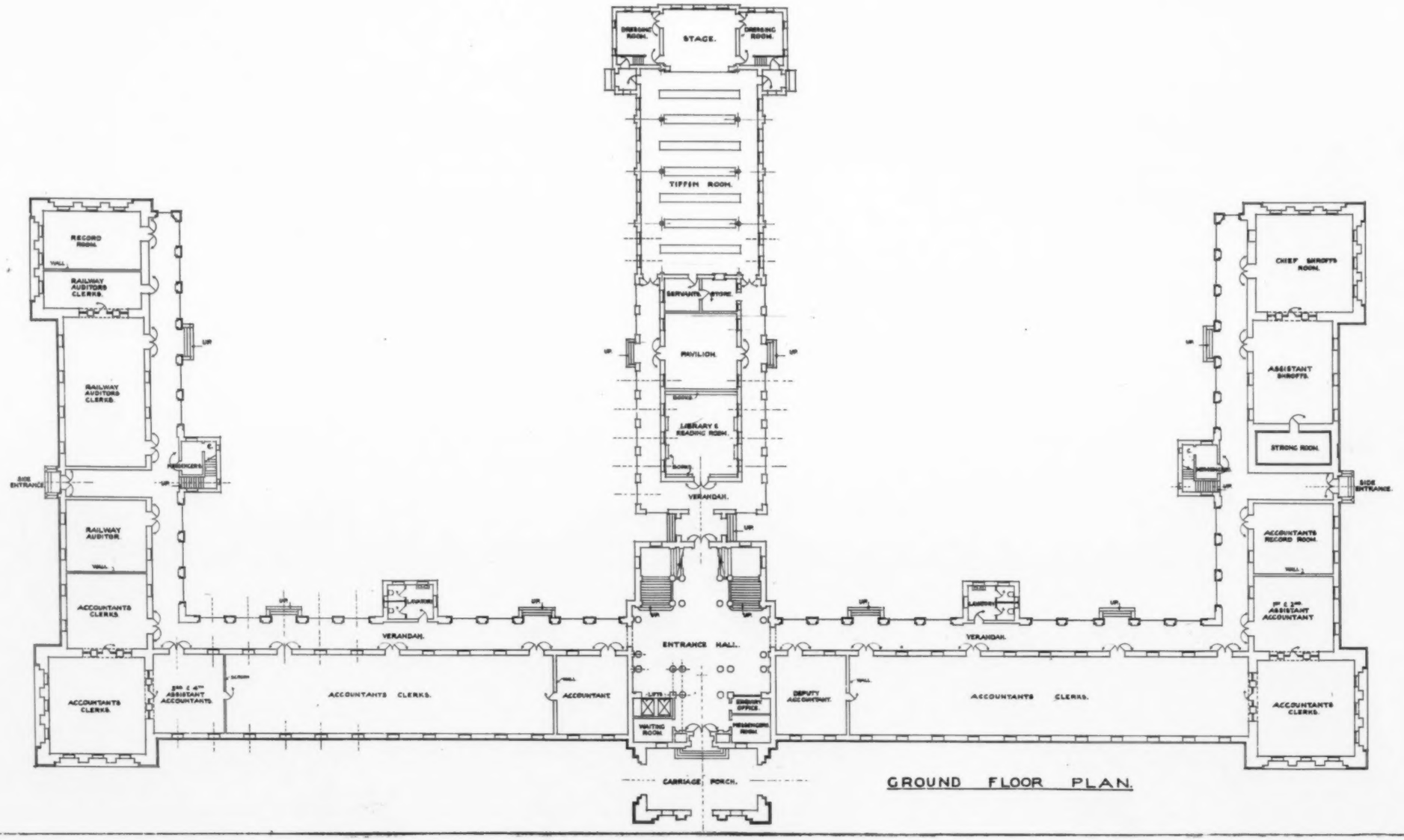
THE BUILDER, DE



EAST ELEVATION.



ELEVATION TO COURTYARD.

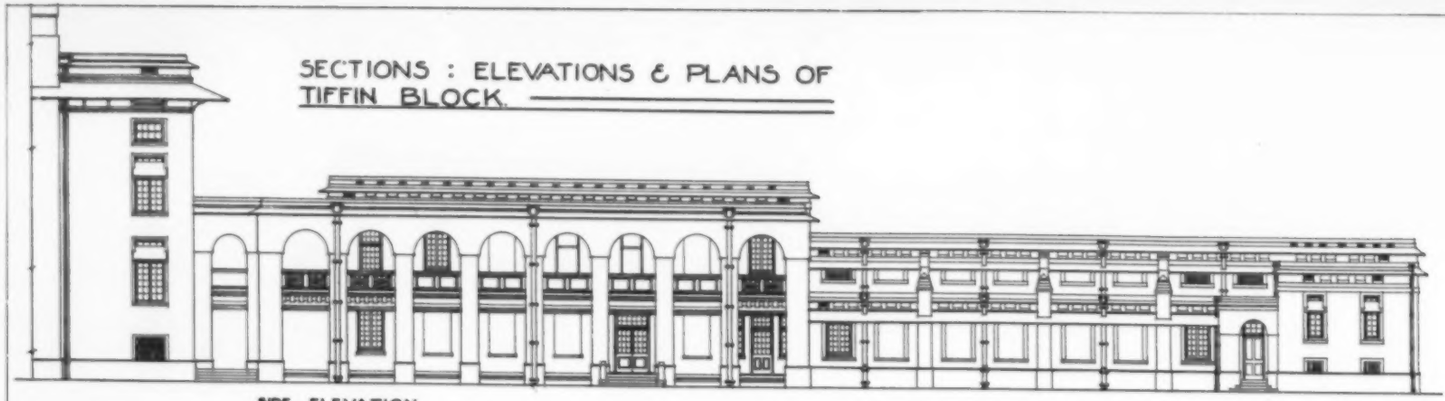


GROUND FLOOR PLAN.

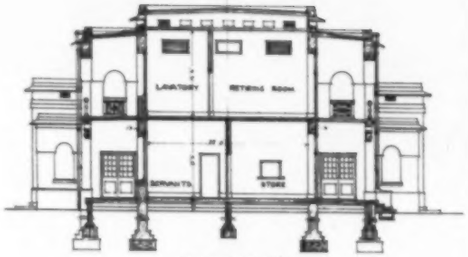
NEW OFFICES FOR CEYLON GOVERNMENT RAILWAYS, COLOMBO.

MR. H. BULKELEY CRESWELL, F.R.I.B.A., ARCHITECT.

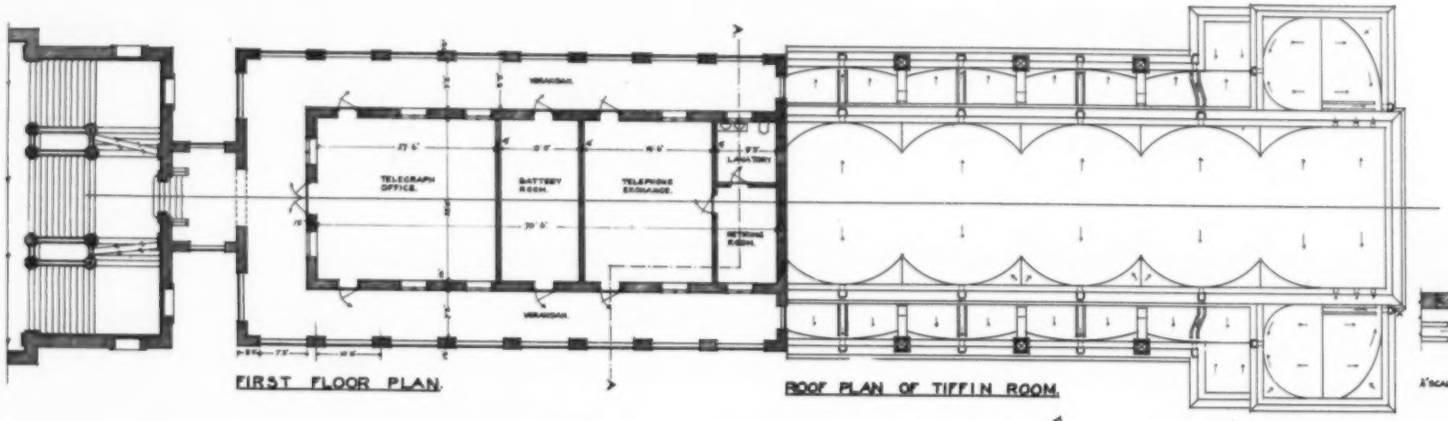
SECTIONS : ELEVATIONS & PLANS OF TIFFIN BLOCK.



SIDE ELEVATION.



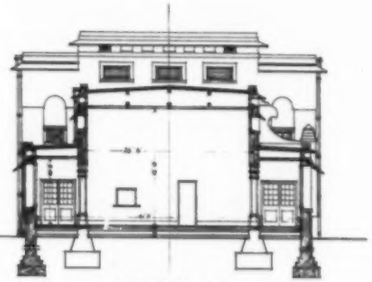
SECTION A-A.



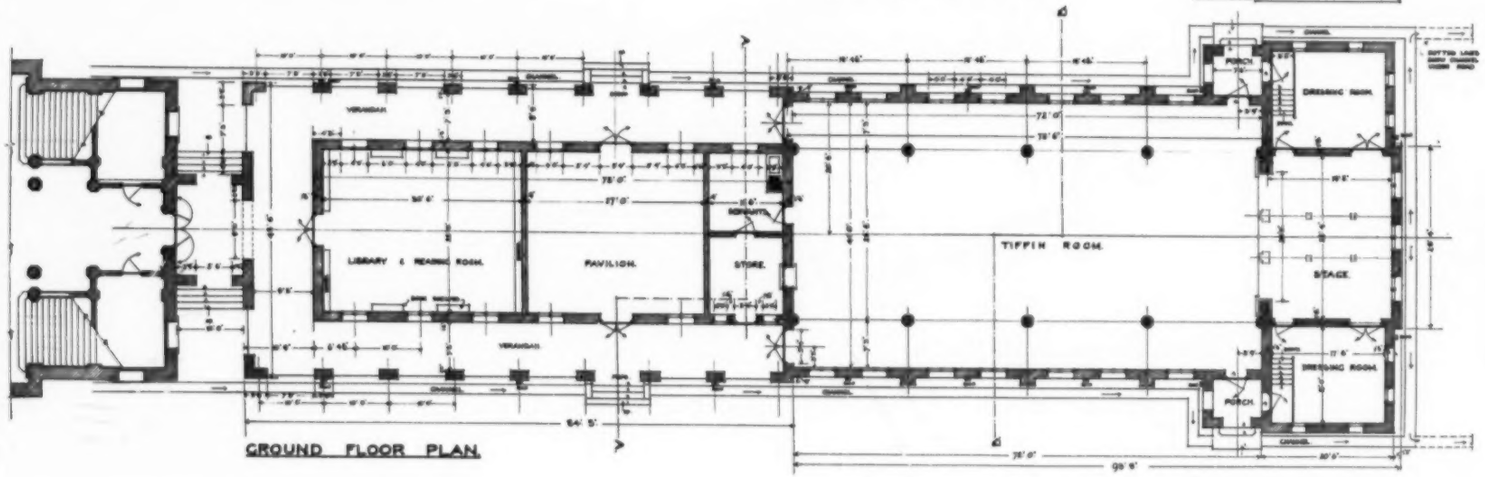
FIRST FLOOR PLAN.

ROOF PLAN OF TIFFIN ROOM.

A SCALE PLAN AT 'X'.



SECTION B-B.



GROUND FLOOR PLAN.

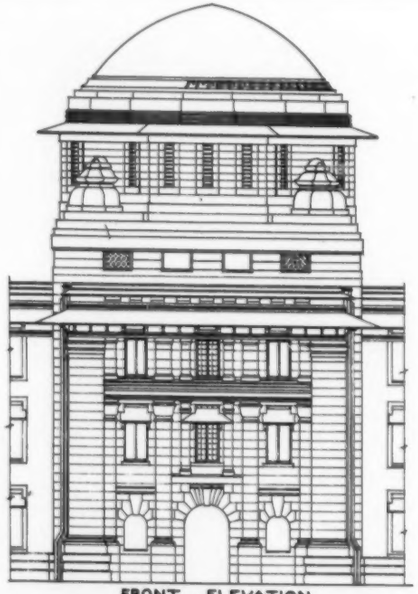
BACK ELEVATION.

NEW OFFICES FOR CEYLON GOVERNMENT RAILWAYS, COLOMBO.

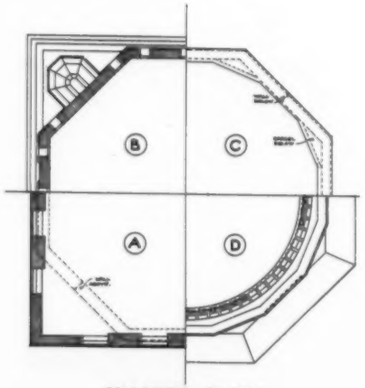
MR. H. BULKELEY CRESWELL, F.R.I.B.A., ARCHITECT.

THE BUILDER, DECEMBER 5, 1924.

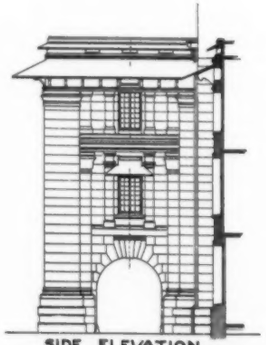
CENTRAL PAVILION



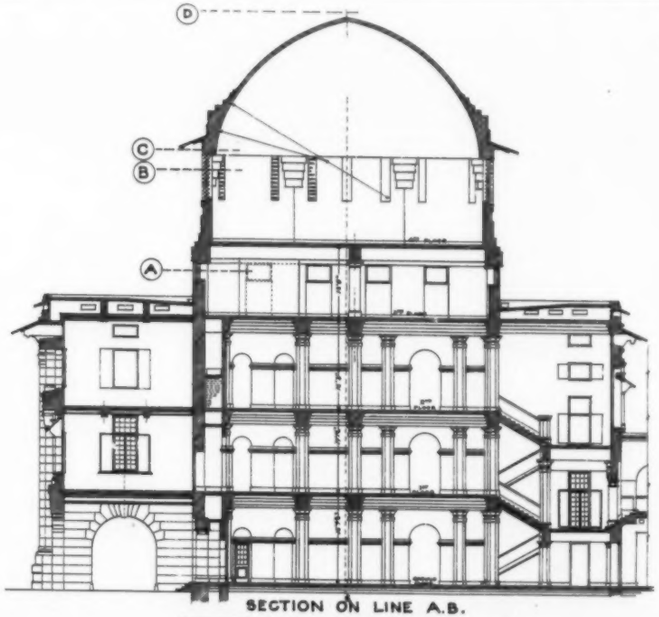
FRONT ELEVATION.



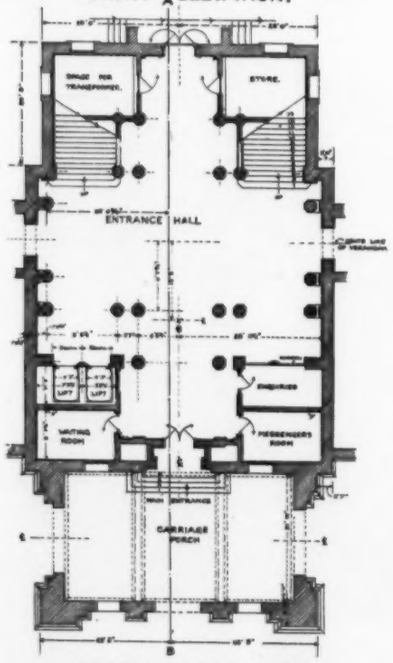
QUARTER PLANS.
(SEE SECTION)



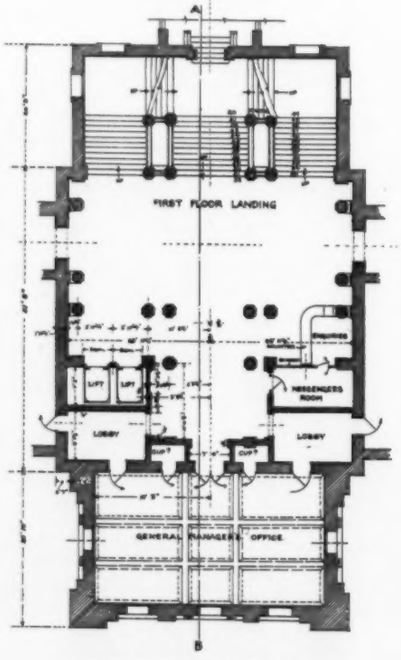
SIDE ELEVATION.



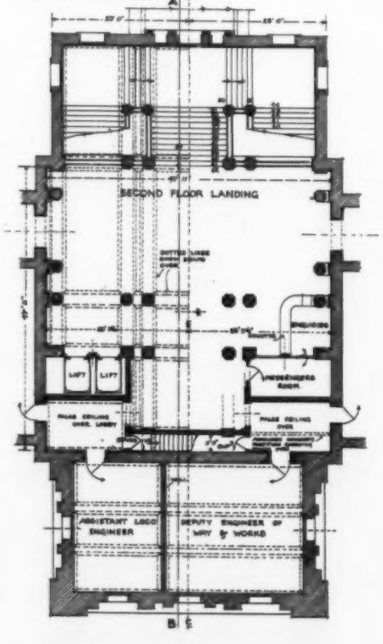
SECTION ON LINE A.B.



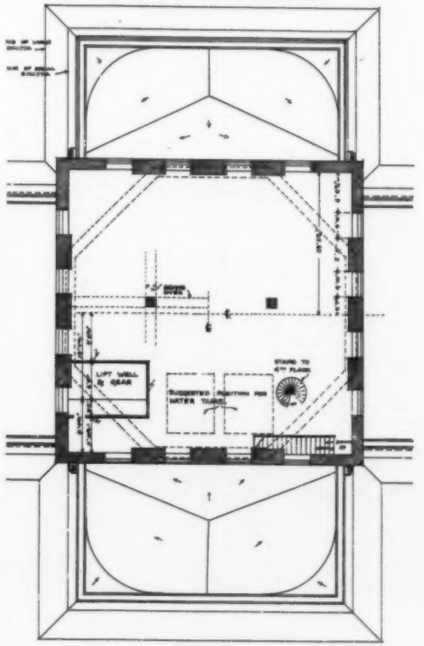
GROUND FLOOR PLAN.



FIRST FLOOR PLAN.



SECOND FLOOR PLAN.



THIRD FLOOR PLAN.

THE BUILDER. DECEMBER 5, 1924.

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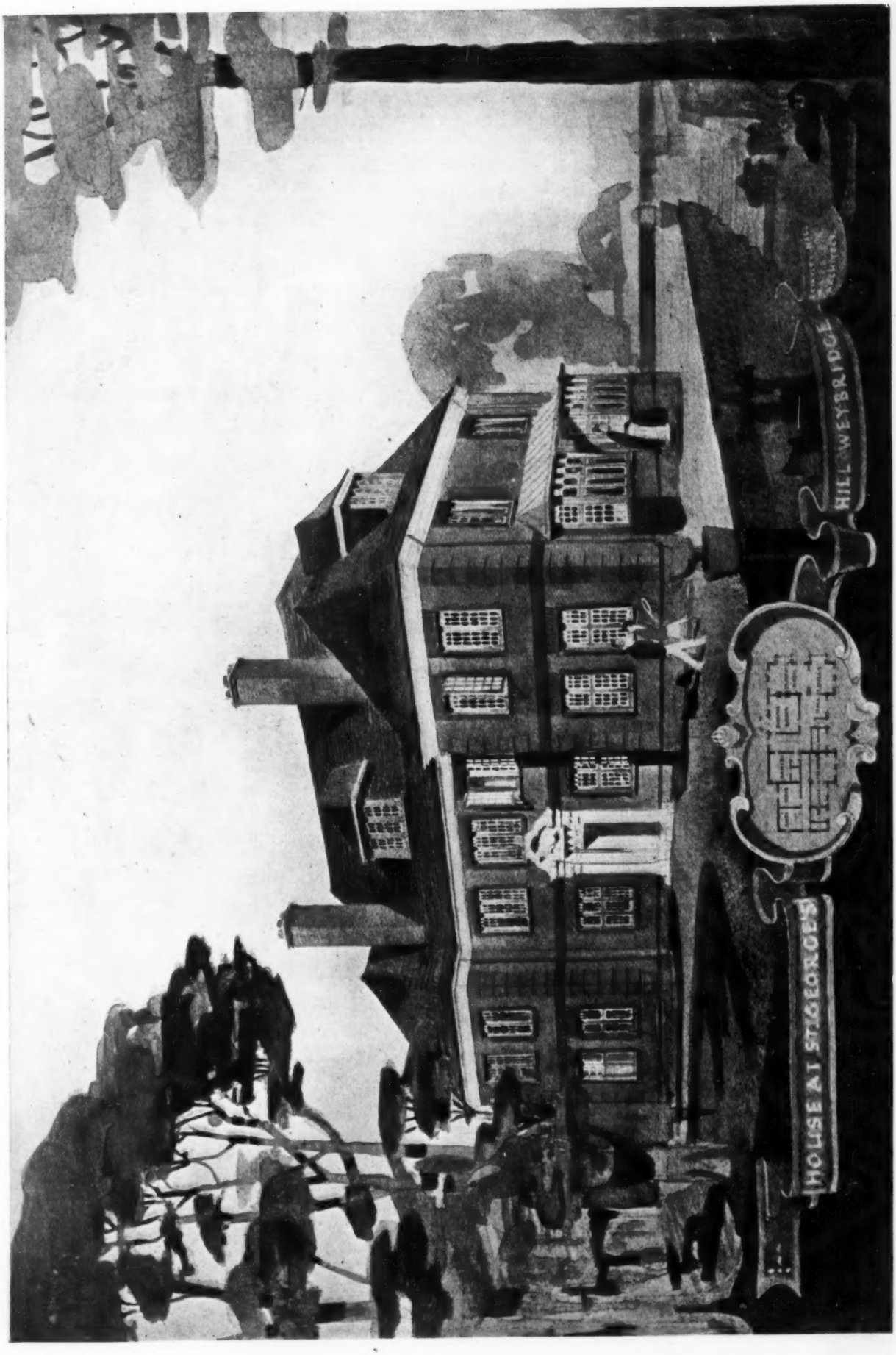

House on St. George's Hill, Weybridge. Designed by Mr. E. Stanley Hall, F.R.I.B.A.

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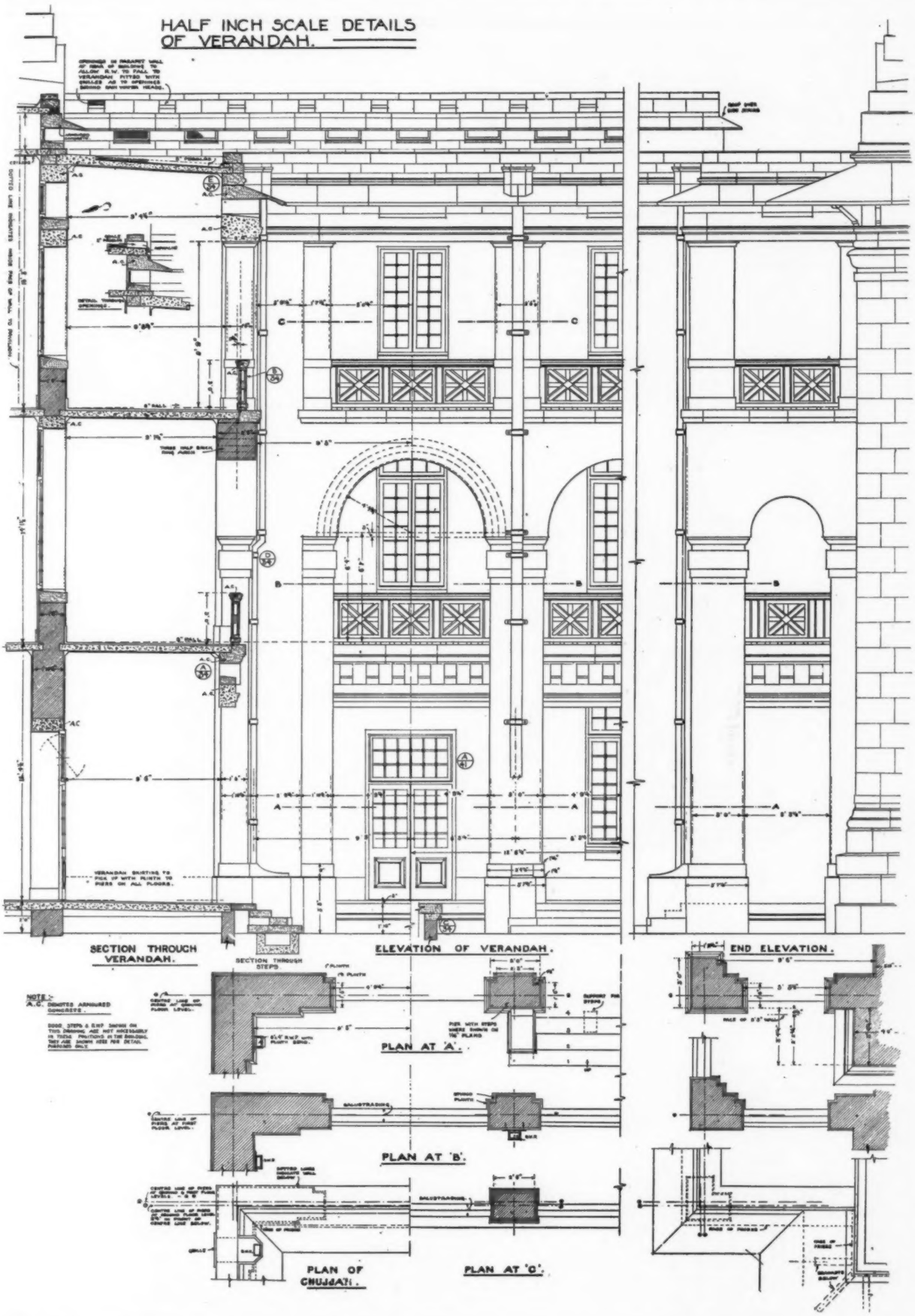
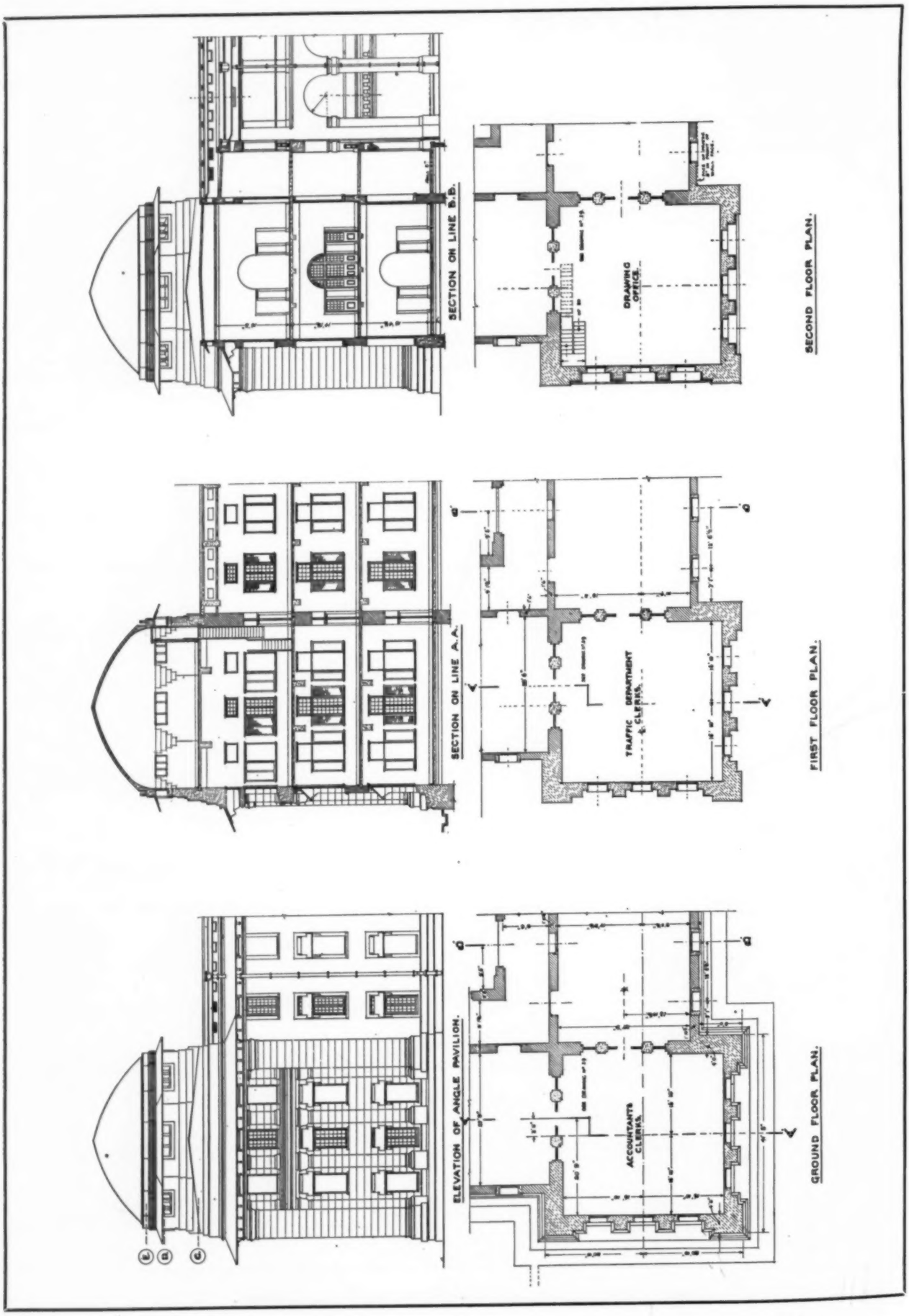
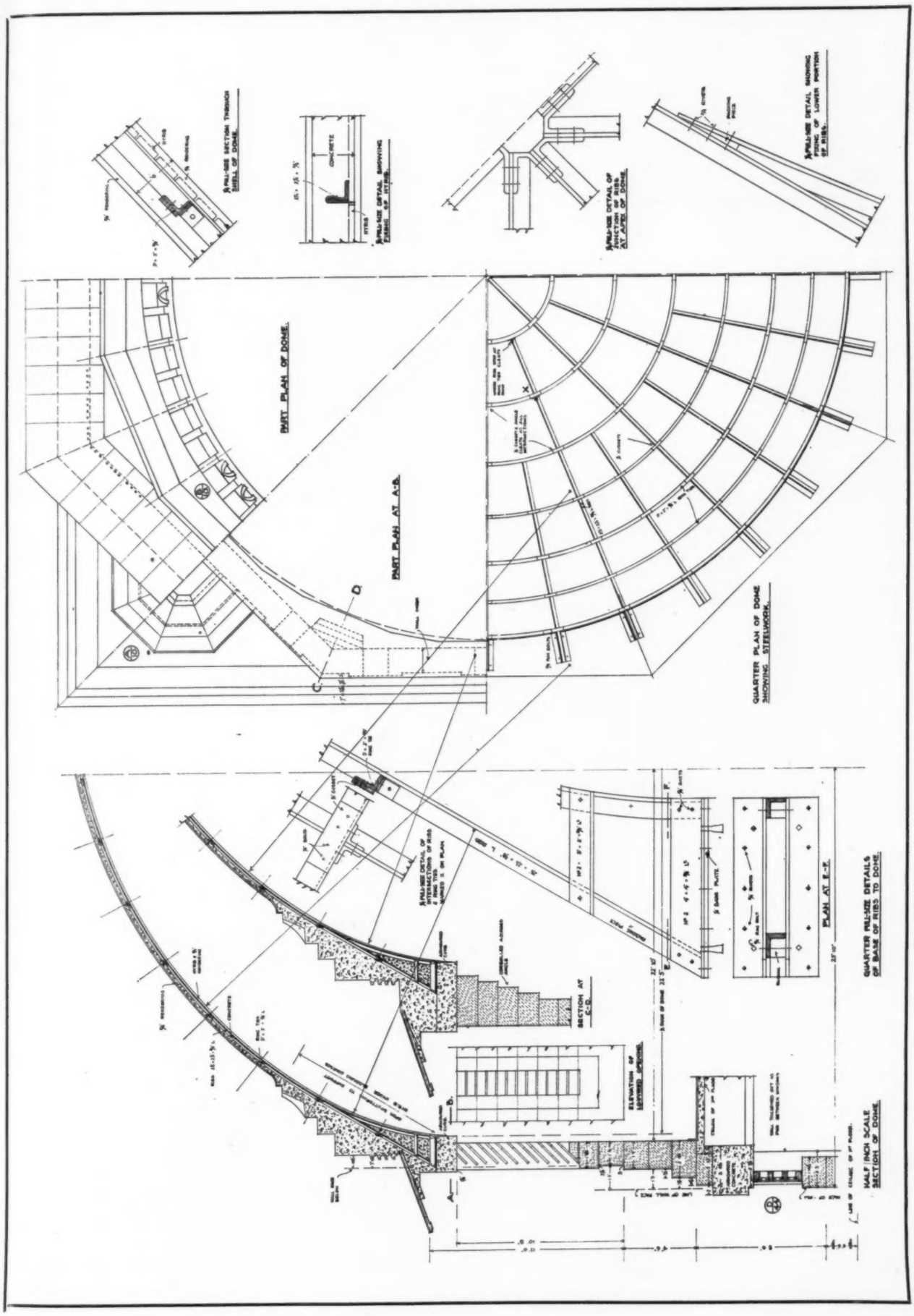


New Offices for the Ceylon Government Railways, Colombo.

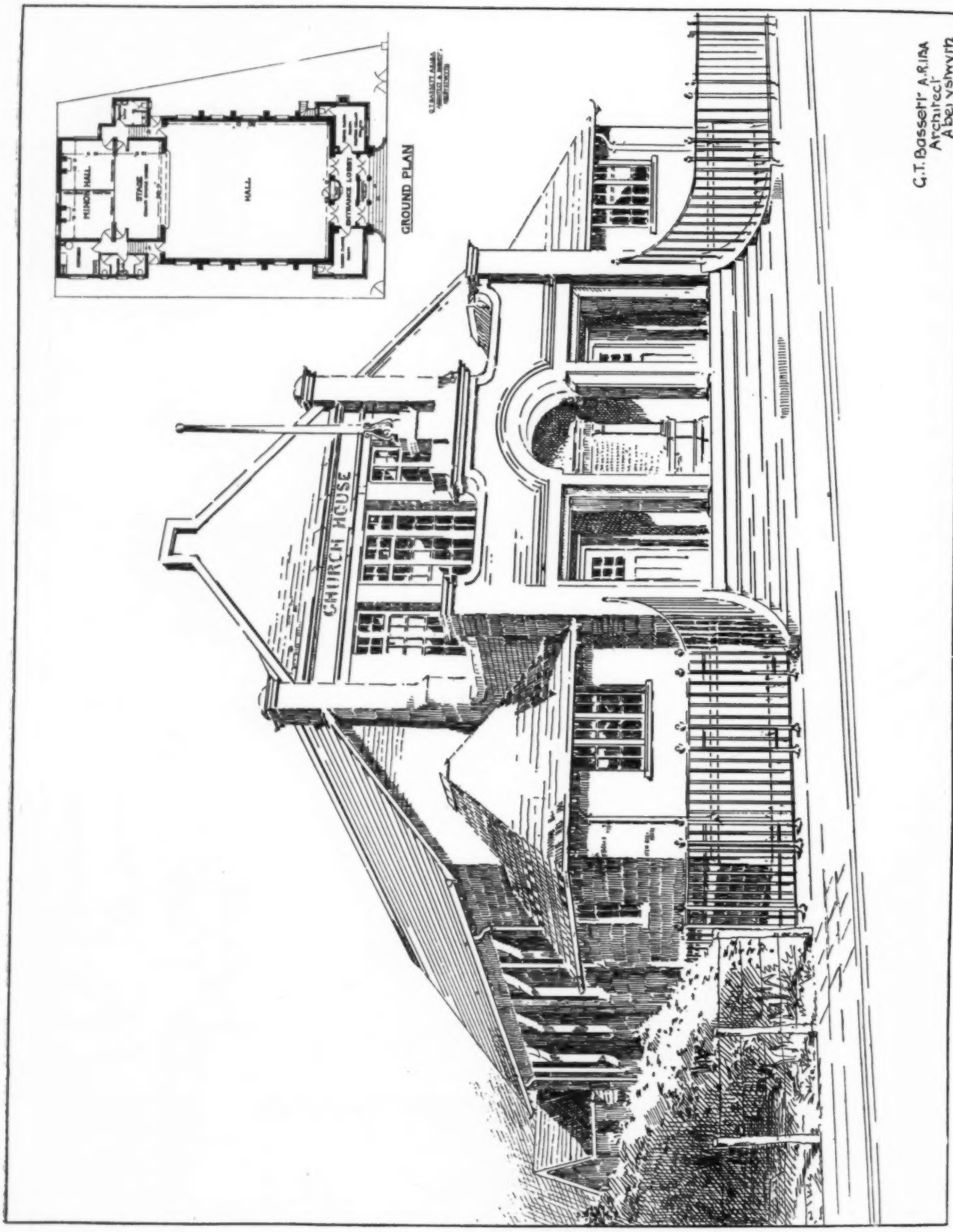
MR. H. BULKELEY CRESWELL, F.R.I.B.A., Architect. (*See p.* 895.)



New Offices for Ceylon Government Railways, Colombo: East Pavilion. Mr. H. Bulkeley Creswell, F.R.I.B.A., Architect. (See p. 895.)


PART PLAN OF DOME.
PART PLAN AT A-B.
QUARTER PLAN OF DOME SHOWING STEELWORK.
SECTION AT C-D.
ELEVATION OF LOWER CHORD.
PLAN AT E-F.
QUARTER FULL-SIZE DETAILS OF BASE OF RIBS TO DOME.
HALF INCH SCALE SECTION OF DOME.

[New Offices for the Ceylon Government Railways, Colombo: Constructional Details of Central Dome.
MR. H. BULKELEY CRESWELL, F.R.I.B.A. Architect. (*See p.* 895.)



Church House, Newtown. MR. G. T. BASSETT, A.R.I.B.A., Architect. (*See p.* 895.)

WESTMINSTER ABBEY RE-EXAMINED.—X

By W. R. LETHABY.

MOSAICS AND STAINED GLASS.*—PART I.

MOSAICS.—At Westminster, there are six remarkable examples of Roman mosaic works of the thirteenth century, a group unequalled outside Rome itself: (1) The Pavement of the Presbytery, dated 1268; (2) The Pavement of the Confessor's Chapel; (3) Tomb of the Young Princes, John and Alphonso, and of Katherine, daughter of Henry III; (4) Tomb Slabs of John and Margaret de Valence; (5) Basis of the Confessor's Shrine, 1279; (6) Tomb of Henry III.

We may begin our examination of the Presbytery floor with the description of Keepe, 1683: "Ascending by two or three Steps until you come to the Rails that compass in the High Altar, you there behold that noble and most glorious inlaid Floor still remaining intire that was done by the command of Richard de Ware, Abbot of Westminster; where in most artificial Work and delightful Figures you have the *Jasper*, the *Porphyry*, the *Lydian*, the *Touch*, the *Alabaster*, and the Serpentine stones, so laid and wrought to the Spectator's satisfaction that you are unwillingly drawn from the sight thereof; round the Squares and Great Circles, in Letters of Brass, are some of the verses still remaining, which when entire were thus to be read, concerning the duration of the World. *Si lector*," &c.

The floor was in fact of red and green porphyry and glass mosaic inlaid in Purbeck marble. On it were Latin inscriptions: (*a*) a single verse around the Central circle to the effect that it was an image of the archetypal sphere; (*b*) a curious prophetic calculation as to how long the world would last; (*c*) words dating the work to this effect, + the year of Christ, 1268, King Henry the Third, the City (Rome), Odoricus (mosaic-worker), and the Abbot (Richard Ware) assembled these porphyry stones together.

The minute details given in the accurate woodcut in "Gleanings," can still for the most part be verified, although some letters and indents of the inscriptions have disappeared in the sixty years since the drawing was made. Around the central disc six letters now remain of the words, MoNsTrAt aRchEtypum. Of

FIG. 2 (one line).

the straight band on the north side there only exists a letter of lapidEs; and O and E remain on the east side. Most of the straight band on the east can be read from the indents beginning + Xri, and the important line containing the names is still certain on the west—*Tercius Henricus Rex, Urbs, Odoricus et Abbas.* The

FIG. 3 (one line).

curious prophetic inscription was on the strip round about the four circles next to the big central circle. (See Neale and *Gleanings.*) Here I have found two brass points (:) in a continuous sunk groove. The lettering on Abbot Ware's grave slab seems to have been of the same kind. Both of these have entirely disappeared—the dots on Fig. 1 show the positions of these inscriptions. Fig. 2 is a restoration of what remains of the name of Henry III, and Fig. 3 is the name of the artist; this is usually given as Odericus, but the second vowel was certainly O. Both names are in a single line.

Many parallels to the prophetic inscription are known. In the evening *Westminster Gazette*, October 26, 1906, a correspondent quoted an old Gaelic saying, "*Tri aois coin aios eich*," &c.:—

"Thrice dog's age, age of horse;
Thrice horse's age, age of man;
Thrice man's age, age of deer;
Thrice deer's age, age of eagle;
Thrice eagle's age, age of oak."

A complete record of this wonderful and romantic pavement fully illustrated by a minute survey, should be made at once—there is some necessary loss by age, and probably the last trace of a letter disappears every year.

The plan of the floor given by Ackermann, together with Malcolm's detailed description, when compared with the minutely accurate plan in *Gleanings*—made before the repairs of 1866—make it possible to decide that in 1800 the details of the pavement were much as they are to-day. Ta man is recorded to have made a careful plan in the eighteenth century, but I cannot discover if it now exists. The plan (Fig. 1) is from an outline print of Ackermann's tinted engraving, and on this I have dotted the position of the inscriptions.

The floor as we have it now has been much repaired; often it appears with plain marble in place of intricate mosaic patterns. Burges observed that the big central circle "has a very modern look," also that the fillings of the four smaller circles round about it were not satisfactory. Most of the fillings of the small circles in the wide margin look equally doubtful. Neale speaks of injury "by wear and the removal of thousands of tesseræ." Ackermann (1811) cites the "lamenting enthusiasm" of Malcolm. Malcolm himself (1803), beginning his description of the Presbytery with the then existing Altar, continues: "Descending two steps which cover parts of the mosaic, we tread on the wreck of the most glorious work in England; venerable through age, costly in its materials, and invaluable for its workmanship. What must have been the glories of this holy place soon after the completion of the church! An admirer of the arts must view it with deepest regret. . . . since it has been the custom to show the choir for money, it is trodden, worn and dirtied daily by hundreds. Is it not a national treasure? When it is quite destroyed can we show such another?" He then gives a detailed description, from which it appears

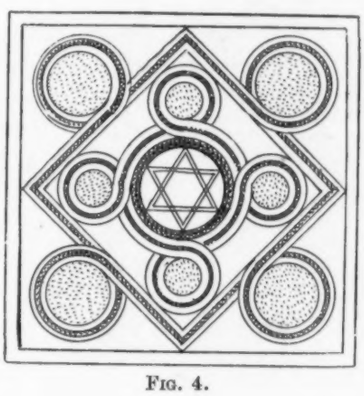


FIG. 4.

that the number of brass letters which remained were much as at present, and that the band of stars around the central circle was "much depredated." It is clear that the floor as we have it now must to a considerable extent be the result of successive repairs.

It is said that the larger circle near the north-west angle was renewed about fifty years since This would be in 1866, when Scott refaced the reredos and "restored" the destroyed half of the eastern margin of the floor. The pattern of the circle and doubtless the other repairs of the time carried on the old design. The plainer strips filling out the spaces on the north and

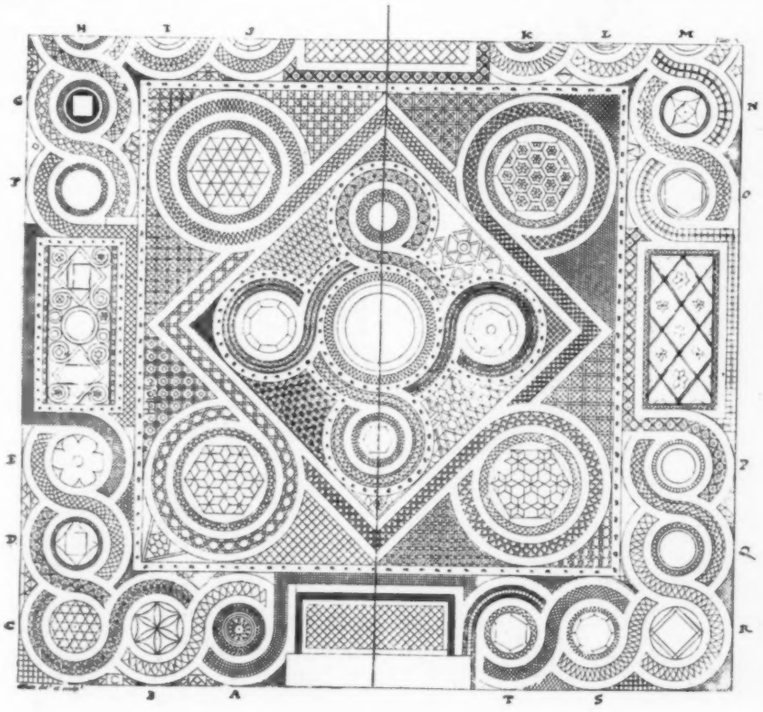


FIG. 1.

*To the last part I would add the following note: Malcolm, describing the Chantry of Henry V, says that while he was examining it "a large portion of two canopies fell by their own weight, which has scarcely more solidity than lumps of sand dried in the sun. They have been covered with whitewash that remains perfect till the stone actually powders into dust beneath it."

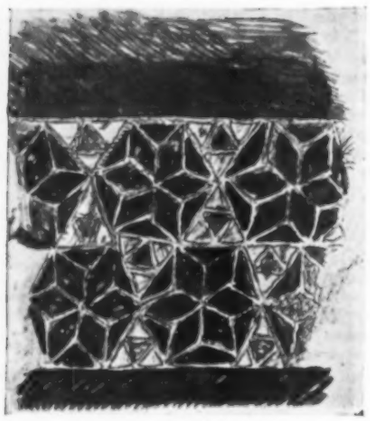


FIG. 5.

south sides were added. An abbot's coffin, thought to be Crokesley's, now in St. Paul's Chapel, was found at this time in front of the reredos, and another coffin—probably Ware's—was seen on the north side. The foundations of the Confessor's church were also then discovered.

I consulted the late Mr. W. Brindley about the large central circle, and he said: "It certainly would have been more worn if it had been there from the first; circles like this for table-tops have long come into the country." The original centre may have been of porphyry or have had some device relating to the surrounding inscription. As was observed by Miss Mary Hervey and myself independently, Holbein's portrait of the Ambassadors in the National Gallery represents this floor and the central circle here contains two interlocking triangles. Fig. 4 gives as a complete plan the indications of the perspective in the picture. The same pattern of interlaced triangles also occurs in the stained glass of the apse windows made in Wren's time. It also occurs in the original mosaic pavement of the Confessor's Chapel. From these facts we might certainly infer that the central circle had these interlacing triangles were it not that it is possible that the Confessor's pavement was the source from which the pattern was taken by both Holbein and Wren. This symbolic device is sometimes called the Shield of David. The short inscription round about would seem to have had reference to some special device or representation here. The late mediæval writer, Sporley, says that the meaning of the short inscription was that the round stone had the colours of the four elements—fire, air, water and earth. This brings to mind a plan of the universe given by Matthew Paris in a British Museum MS., which shows four concentric circles inscribed fire, air, water and earth. Either by the mixed tints of porphyry or by some definite arrangement of colours the universe was symbolised. This central circle is surrounded by a band of glass-mosaic forming a star pattern (Fig. 5). Glass mosaic is also found in the grave slabs on the north and south sides. Burges seems to have thougth that the use of glass tesseræ was confined to these places, but it seems originally to have been distributed all over the floor.

The intricate and altogether remarkable filling of circle E on the plan Fig. 1 is largely of glass. It is now so far obliterated that without the help of sketches and a rubbing made many years ago it is doubtful if it now could be made out. It is certainly entirely original (Fig. 6). Medallion A, Fig. 1, looks modern in workmanship and material, but the design may be old. B almost certainly had the spandrels of mosaic like a similar circle in the Confessor's Chapel, but all is now of marble; C seems largely

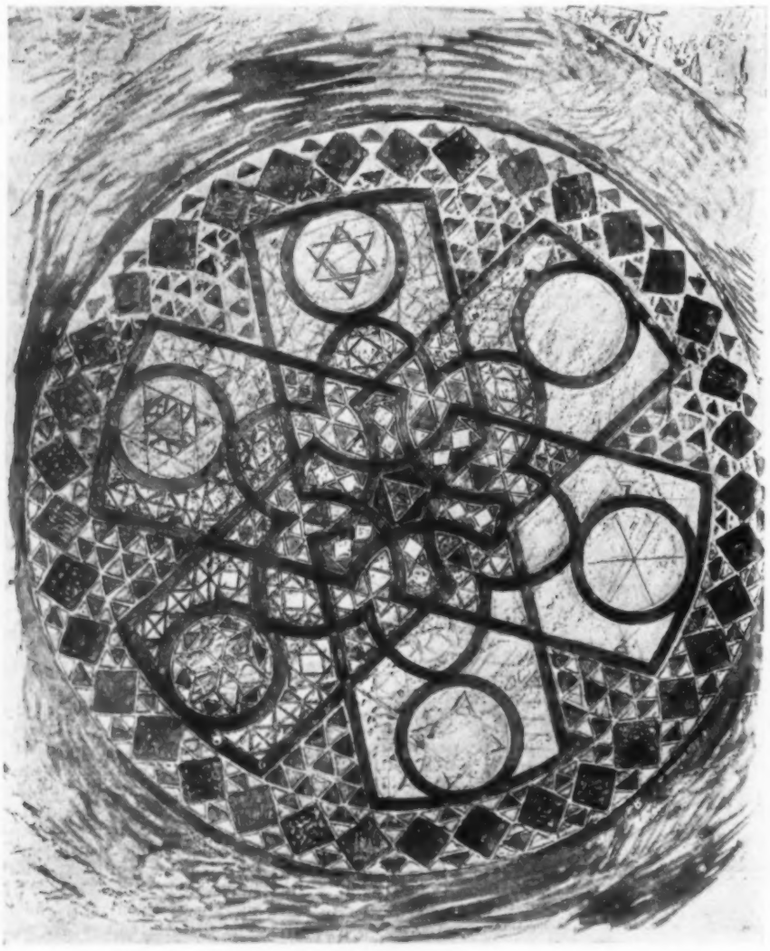


FIG. 6.

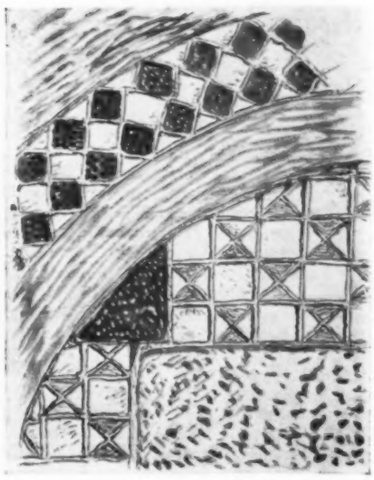


FIG. 7.

ancient; D, of marble, is probably an old renewal; E is discussed above; F is doubtless semi-modern; G still retains mosaic about a small square slab, and this may be, or represent, ancient work (Fig. 7). H to M were cut off by semi-modern steps; the circles were restored by Scott in 1866. K, perhaps in part, follows the old pattern. The rest, N–T, seem to be all semi-modern.

The history of the floor is fully documented. The lettering formerly around the grave on the north side told how Abbot Richard Ware brought the stones from "the City." In the Patent Roll for 1269 is this interesting entry, which I have never seen quoted: "Acknowledgment of £50 to the Abbot for the pavement which he brought with him from the Court of Rome to the King's use to be put in the Church at Westminster before the King's great altar there and for the service which he did the King at the Castle of Kenilworth." This reference to the Vatican suggests that the materials may have been a gift from the Pope. In the Pipe Roll for 1267–8 appears an entry for the stipend of certain *cementariorum pavatorum* working before the Feretory of Saint Edward. These craftsmen must have been Odoricus and his assistants. In the Roll for 1271–2 occurs a similar entry "for making the pavements before the various altars." This may refer to the Confessor's Altar and an Altar of Relics in the same chapel.

Confessor's Chapel.—When I studied this floor before I thought that the mosaic could not have been laid until Henry III's tomb was in place, for the pattern stops short of the tomb, and that it might be as late as 1285. On the other hand, provision for this tomb and its execution, or at least commencement, is probable during the life of the King. The grave slab of John de Valence (died 1277) seems to form a considered part of this floor, and I would now suggest that it was begun on the completion of the Presbytery pavement. Burges thought that this floor was an English work made in imitation of the Presbytery pavement, but a

FIG. 8.

mosaic in Sta. Prassede in Rome may be put in as evidence on this point. This example is only a panel, but the pattern and details are very similar, and it is cut in on a slab in the same way as ours. See the illustration in Mr. A. Christie's delightful book on "Pattern Design" (Fig. 8). The Roman panel, he tells me, forms the front of an altar, and it bears an inscription with the date 1238. It might be by one of the masters who later worked at Westminster.

One idea of these mosaic workers was constant variation of the minor patterns. Of the dozens of circles filled with patterns in the floor of the Confessor's Chapel, there do not seem to have been two alike. Some sketches hurriedly done when the floor was uncovered are here added to those I gave before (Figs. 9 and 10).

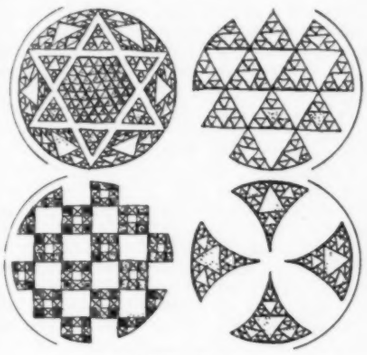


FIG. 9.

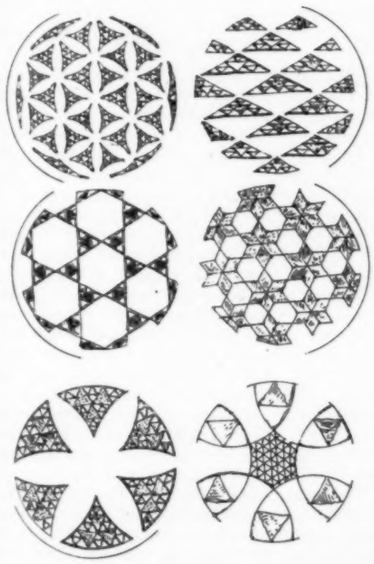


FIG. 10.

Fig. 11 is an enlarged detail. Some others with a general plan are contained in the first volume of the Architectural Association Sketch Book. (See also Scott's *Gleanings*, Malcolm, and some rubbings in the Print Room, South Kensington, from one of the floors.)

The Confessor's Shrine.—The high marble and mosaic basis which supported the golden coffin or shrine was of minute workmanship. As some existing portions still show this was largely of gilt-glass tesseræ, the glow and glitter of gold must have been the most marked characteristic. An inscription in large letters of blue glass on a gold ground recorded that it was the work of *Petrus Romanus Civis*, 1279.

About 1910 an American student, Miss Cecilia Waern, sent me a small photograph of the monument of Pope Clement IV at Viterbo with the note, "This is said to be by your Westminster Pietro d'Oderisio. It looks *new* for it has been moved about and set up again and finally decently restored about fifty years ago, and again in 1885; but the simple elegance is still very charming after first shock *of scrape.*" (Fig. 12). This tomb of Clement IV (died 1268) was signed by Petrus Oderisi, and in a guide book to Viterbo, published as early as 1894, it had been noted that it must have been made by the artist who worked at Westminster.

FIG. 12.

This identification was adopted by Professor Frothingham in *Monuments of Christian Rome* (1908), and by Mr. Gerald Davies (1910). Frothingham thought that Petrus and Odoricus of the Westminster inscriptions were probably one, for "it was sometimes the habit to call a man by his patronymic." Mr. Gerald Davies writes: "The father wrought the pavement of the Presbytery, while the son Pietro Oderisi completed and signed the tomb of the Confessor. . . . Another son of Oderisi, Stephane, is known." The best reading of the facts would, I think, be that Odoric and his sons were the most famous mosaic workers in Rome in the period 1260–70, that Henry III, advised by the Pope, through Abbot Ware, attracted the father to Westminster. The Pope died in 1268 while Odoric was away from Rome, and Peter, his son, made the Papal tomb. When this was done Peter came to Westminster to execute the basement of the Confessor's shrine. He may have been here before with Odoric. Frothingham wrote of him thus: "A leader of the Roman School, Peter, son of Oderisius, made the first attempt to introduce both sculpture and mosaic decoration in sepulchral art in his tomb of Clement IV at Viterbo in 1268. . . . He also *for the first time* substituted for the antique architrave and classical orders the Gothic trefoil arch and foliated capitals; it was quite a revolution." Our shrine base has trefoil arches, and we may ask: was the revolution in the Roman marble-workers' style a consequence of their contact with Westminster? A comparison between the works at Westminster and Viterbo shows such resemblances as confirms the view that they are both by the same master. The main arch of the Viterbo tomb has cusps in the Westminster style. One of the arched compartments at Westminster is filled in a singular way by circles at top and bottom connected by vertical strips, and the same awkward arch-filling is found at Viterbo; there one of the columns is inlaid with an inverted chevron pattern, and the same occurs on one of the niche heads of the shrine base. Again, on the tomb of Henry III, which was certainly by the same master who made the shrine base, there are similar patterns and large crosses in the two recesses; there are similar crosses on the Pope's tomb.

The shrine basis was surmounted by a flat cornice band which bore the inscription giving the name of Peter. A fragment of this cornice exists which must have been part of the west end; this is wrought on three sides, and a rebated joint shows that it projected as a "break" about 9 in. beyond the angle.

On comparing the record of the whole of the inscription with a part which is now apparent on the east front, it will be found that extra space was required at the west end for several letters more than those at the east end. This extra space was provided by the projections just described. These projections of the cornice of the west front of the basis were probably supported by the larger spiral mosaic columns, which are now half buried.

Scott says that these pillars at the west end were found to agree in height with those at the east; that is, they would rise to the bed of the inscribed cornice. The best preserved portion of mosaic is in one of these columns and the part formerly buried may have been placed uppermost by Scott. In the Print Room at S. Kensington is a careful drawing, inscribed, "Done in 1850 by uncovering the base of the columns of the tomb of the Confessor. I made this drawing and we then covered it up again.—A MacCallum."

Among the fragments in the Triforium, I recognised some years ago two of small spiral marble columns with lines of gilding following the twist. The shrine at St. Albans had detached spiral columns around the shrine, which are almost exactly like these, and fragments of similar pillars exist at Winchester. (For these, see *Antiquaries' Journal*, October, 1924.) In all these cases, these pillars probably supported candlesticks. There is a Westminster record that in 1290, 46s. 8d. was paid for making three marble columns around the shrine, and our fragments are probably of these. (Fig. 13, without base).

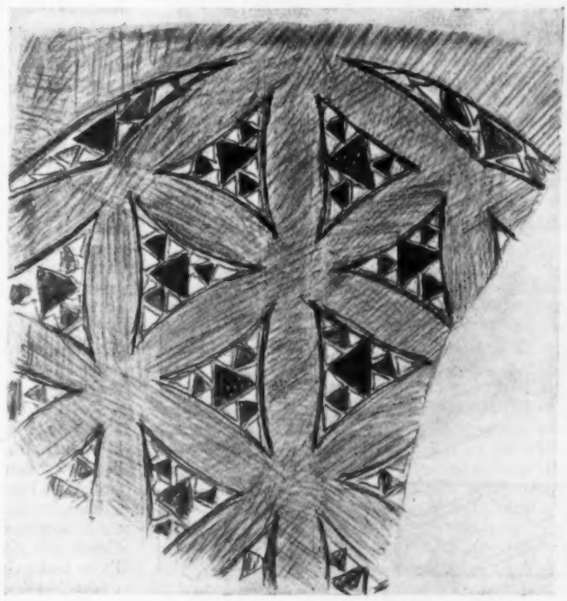


FIG. 11.

The original cornice of the basis was the inscribed course consisting of a "face" with a few mouldings above. When the existing wooden shrine was set on the marble basement by Abbot Feckenham (1556-8), the sides of the marble work were heightened by the addition of

FIG. 13.

a new projecting cornice. At the same time what now appears as a narrow frieze under this new moulded cornice was made longer and wider. It had been the margin of the slab on which the shrine proper rested, and it was originally narrower and shorter than the inscribed band or cornice, forming a "step" above it. This step course was enlarged in an irregular way, as may be seen by the spacing of the pattern, and a few years ago Mr. Westlake found that, on the south side, there was hidden a complete angle piece and return, near, but not at the west end.

The Presbytery pavement, the shrine basis, and the tomb of the Pope at Viterbo, were all signed prominently by the artists who made them. Examination of similar works in Italy shows that this school of Roman mosaic workers made a practice of putting their names on monuments, frequently adding (as in the case of our shrine) the words, "*Civis Romanus.*" This points to the existence of some guild of workers who prided themselves on seeking the inspiration of ancient Rome and turning away from the art of the Tedeschi of the Lombard schools. Such a thought was the germ of the whole Renaissance, which in essence was the rebirth of national culture and the repudiation of Germanism. The Westminster inscriptions are thus specially interesting and they resemble other inscriptions in Italy so closely that it is probable that they were suggested by the craftsmen themselves.

If all the artists who signed themselves Oderisio were of one family they must have been an artistic clan comparable to the Cosmati. The fine bronze doors of Troja Cathedral in South Italy, made in 1119-27, bear the name of Oderisus of Benevento. At Eboli, near Naples, a fine picture of the Crucifixion is signed Robertus de Oderisio, a follower of Giotto (Woltmann and Woermann, "History of Painting"). Dante tells of Oderisi of Gubbio, "the honour of that art which, in Paris, is called illuminating." According to Vasari he was working in Rome bout 1295.

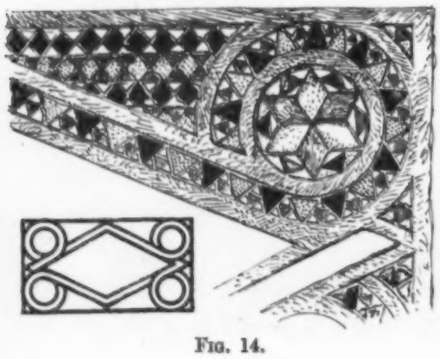


FIG. 14.

The shrine basis is in many ways a work of extraordinary interest. The recent cleaning of it has revealed many details of the mosaic patterns. By the evidence of small portions remaining here and there together with imprints left in the matrix where the mosaic has been picked out, the designs could almost fully be made out and a restored drawing made by any student. Fig. 14 is a restoration of one of the frieze panels. A patient study of this one monument, and more still of the series of mosaic works, would be instructive to do and valuable in result. The point has been reached when special work on details is required.

Tombs.—Recent cleaning has also revealed the glittering splendour of Henry III's tomb. It was a surprise to find that much pure white was used to set off the gold and colour. In the borders, where one pattern is continuous, the background colour is varied in lengths of a few inches. At the east end, where it is sheltered, the panels are largely complete.

The small tomb of the royal children, Katherine, John, Alphonso, &c., now in the south ambulatory, has also been cleaned and the general disposition of the mosaic work can be traced. At the east end the now mostly-hidden panel was like the restored sketch, Fig. 15; the central disc remains and the two on the left may also exist. The side of the tomb which was placed against the wall here, about 1395, may still be in good condition.

Two grave slabs close in front of Henry V's tomb form a part, as has been mentioned, of the

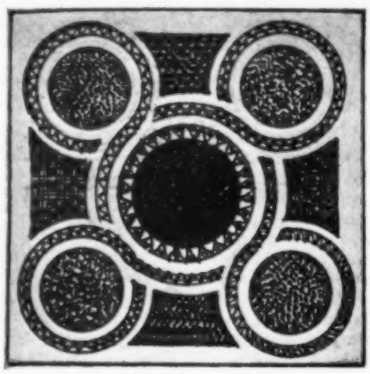


FIG. 15.

floor of the Confessor's Chapel and must be contemporary with it. They were memorials of John and Margaret, son and daughter of William de Valence. Both had brass crosses and one of them had the field set with mosaic; this was probably the tomb of John; it occupied a position on the central axis of the pavement and thus seems to have been the first to be put in place. With the mosaic a few letters were found, . . . LAME: on one side, with traces from which the name Willame could be safely inferred, and on the other side RLEA. About twelve years ago a portion of the plain paving by Henry V's tomb, which overlies the slabs, having been lifted, the end of the second slab was exposed and this retained several letters and imprints giving VALENCE : KI : PUR : LA . . . The name Valence began under the foot of the cross and the rest continued up the south side of the cross.

Putting the remnants of the two inscriptions together it is evident that they must have been in French, and of the well-known form: + Here lies John son of William de Valence for whose soul God have mercy.

The systematic cleaning of the structure and monuments which has been referred to several times has given me more pleasure during my little term than almost anything else—the one exception is the work I have not done in the ancient church.

EXHIBITION NOTES

THE BURLINGTON GALLERY.

ONE can enjoy the variety and interest of the present exhibition at the Burlington Club Gallery without having to consider any special theories or indulge in futile comparisons. We might ask why this or that particular object had been brought here, and the answer would simply be found in the intrinsic interest of the object. It is a richly furnished gallery, for the pictures on the walls and the furniture and objects of art which are admirably displayed combine to form a sort of summarised epitome of the beauty which can enfold and overlay all sorts of things which surround us. What a wonderful specimen of perfect craftsmanship is No. 144, especially when you open it up and note minutely all the wonders of its make! What a remarkably fine Gothic cabinet is No. 43—broad, simple, and vigorous, but with a marked refinement of effect! What a delightful little Gothic figure is No. 57! What a fine glass overmantel is No. 55, and what perfection of work is to be found in the old barometers, 76 and 77! The pictures, the silver ware, the pottery, glass, and the needlework are all of a stimulating interest, and we feel that an exhibition such as this, which illustrates the application of art to many varied objects is, in some senses, the most instructive of any sort. Such things as No. 175, the walnut armchair (1690), are not often met with, and of about the same period are two fine types of stools, 171 and 172. One notes the skill and refinement in the framework of No. 171. The walnut chair No. 44 is another of the wonderful specimens of craftsmanship. Such an exhibition as this is the sort for one to browse over, as a critic has very aptly put it.

FINE ART SOCIETY.

The able paintings by Mr. Dacres Adams at the Fine Art Society deal largely with architectural subjects, which in many cases are very adequately treated, such as the painting of the Waterloo Bridge staircase and the loggia views. There is no mystery or playfulness in these serious drawings, but the rendering of the solidity and mass of the heavier type of buildings is very satisfying. To appreciate the delicacy and grace of our Wren towers and spires is not within the power of many. London is an inexhaustible field for the study of architectural effects, and we sometimes wonder if more artists of capacity could not be tempted to set before us some adequate rendering of their values. The scores of vivid impressions of light and colour to be found in London streets last Monday have probably not found a single expert exponent. The able paintings by Mr. Dacres Adams serve to whet our appetite for more of it, and also for work in a lighter vein.

The water-colours by Mr. Martin Hardie of subjects at home and abroad show a capable hand, and in some cases reach a high level, as in the masterly little view of Frontignan, which has something of the breadth and style of an old Master. "Inland Waters, Cette," and "The Belfry, Honfleur," indicate the varied range of Mr. Hardie's work.

Finnish Architecture.

Professor Tancred Borenius lectured recently before the Anglo-Finnish Society, under the presidency of the Finnish Minister, at the First Edition Club, Little Russell-street. In the course of his remarks the lecturer said Finnish architecture in the Middle Ages was characterised by its great simplicity and strength; the churches were built mainly of large granite blocks, the decorative parts being carried out in brick. The lecturer gave as typical examples of Finnish architecture the cathedrals of Abo and Borga, and the church at Hattula, which was, exceptionally, built entirely of brick. The wall paintings of the churches were often very extensive, and gave an impression of the effect which English mediæval churches must have produced originally.

ST. HELEN'S, BISHOPSGATE *

Of the nine volumes of the great "Survey of London," issued jointly by the London County Council and the London Survey Committee, the last one published, that dealing with the Parish Church and Priory of St. Helen, Bishopsgate, is surely the best and most informative.

We are told in the preface that this volume is the first one dealing with the City of London, with the exception of the monograph on the now removed Crosby Hall, once so near, but recently re-erected at Chelsea, and it is but fitting that St. Helen's should have been chosen for a commencement because of its fine monuments and architecture and of its being easily the first of the ancient churches within its border. Here was also a rich Benedictine nunnery, where for three hundred years the daughters of the merchant princes of London took the veil.

The Church of St. Helen was probably founded before the Conquest, though of this, we are told, there is no proof, but nothing is really known about it until the middle of the twelfth century, when it is mentioned as one of the churches in the jurisdiction of St. Paul's Cathedral.

An important addition to the church was made about 1350, when Adam Francis, mercer, of London, built a chapel in honour of the Holy Ghost. In August, 1374, he left directions in his will for the establishment of a perpetual chantry of St. Mary, and of another in the chapel of his foundation.

Probably the greatest personage connected with the church was Sir John Crosby, Alderman, Sheriff and M.P. for London, and "Mayor of the Staple of Calais," who died in 1475, and is buried in the church. He bequeathed to the high altar of the church £66 1s. 4d. for offerings "delayed or forgotten," 400 marks to endow a chantry for forty years, 100 marks for keeping his anniversary, and other sums for various purposes. He had a mansion hard by, and his name is commemorated in Crosby Hall and in Crosby-square. To Sir John must be assigned the two arches on the south of the parish chancel (one of which spans his tomb), the mouldings and other details being the same as those of the nave arcade, and of the ancient painted glass now in the church; the only parts which can be said to have been there before the Dissolution are the roundels commemorative of him in the north-east window of the south chapel. In this church are also buried Sir Thomas Gresham, the founder of the Royal Exchange; Francis Bancroft, whose original monument now rests beneath the floor of the church in accordance with the instructions of the deceased that it should remain for one hundred years and then be placed underground; Sir Andrew Judd; Sir William Pickering; Sir John Spencer, an ancestor of the present Marquis of Northampton; Sir Martin Lumley, 1634, Lord Mayor of London; and many other City worthies whose tombs are of the ornate character of a bygone age, some of which are illustrated in this volume. The parish records of St. Helen's do not, as in the case of several City parishes, include any of pre-Reformation date.

The Vestry Minutes begin in 1558, but there is a serious gap between 1578 and 1676. The Churchwardens' Accounts begin in 1563. These records contain a certain amount of information relative to the fabric, the material portions of which are printed in a former vicar's work, the Rev. J. E. Cox's "Annals of St. Helen's, Bishopsgate," published in 1876.

The nuns' church, together with the rest of the priory buildings, was granted in 1542 to Sir Richard Williams (*alias* Cromwell). The Leathersellers' Company acquired their property in St. Helen's in 1543, and with it the nuns' choir. In 1561 the Vestry Minutes refer to a conference with this company as to "the repairing and amendment of certaine decayed places on the outside of the north Ile of the Church," and sometime between these two dates the parish had come into possession of the fabric of the nuns' church, but whether by gift or purchase does not appear.

The religious troubles of the middle of the seventeenth century are reflected in two entries in the Churchwardens' Accounts of 1643-44, relating to the taking down of the cross on the belfry, and the defacing of "superstitious" inscriptions. A sundial was set up on the church in the latter year. Few alterations seem to have been made to the fabric or its fittings during the second half of the seventeenth century. There is, however, mention of a new organ in 1683, and to the pulling down of the old engine-house in 1694. At a Vestry meeting held on October 8, 1696, it was agreed that Sir Christopher Wren should be consulted about the repairs of the church. Something was done and finished in 1697, but no particulars of the work are given. In 1696 an agreement was entered into between the parish and Thomas Armstrong that, in consideration of the sum of £100 and taking down the bells, wheels and ropes in the belfry (over St. Helen's Gate in Bishopsgate), and delivering them safe and sound in the church, Armstrong should have the lease of the belfry for sixty-one years (for the purpose of letting). From this it would appear that the bells hung, and probably had hung since the sixteenth century, over the gate-house at the entry to Great St. Helen's, and that only a clock bell hung in the clock-tower, or steeple, over the church.

On June 18 following it was decided to sell three of the four bells for the repair of the church, a thing frequently and unfortunately often done in those days, and even later.

More than half of the volume is taken up with full-page illustrations, no fewer than 123 of these being placed at the end of the book, after the index and imprint of the printer. Several of these illustrations are from original drawings once forming part of the celebrated Gardner Collection of London prints, recently dispersed by auction, and it is a matter for congratulation that since the major part of the volume was printed those drawings relating to St. Helen's have been secured by the Merchant Taylors' and Leathersellers' Companies, who have lent them for reproduction.

In addition, there are several measured drawings by the late J. L. Pearson, R.A. (traced and rearranged by P. K. Kipps), and Messrs. E. R. B. Harris, F. S. Eden, Robert Pearsall, T. O. Thirtle, E. L. Wratten, G. Gordon Godfrey, Percy W. Lovell, Max Judge, Ellis Marsland, A. E. Bullock, J. W. Bloe, P. S. Hudson, F. S. Morden Green, T. Frank Green, and Ernest A. Mann. There are also numerous photographs and heraldic illustrations, some in the text. The frontispiece is a well-executed coloured representation of stained glass, with the Merchant's Mark of Sir John Crosby in the border, and a Shield of the Arms of Lady Crosby, drawn by F. S. Eden.

We look forward to the forthcoming publication on the parish itself, so full of topographical interest. If these beautifully produced volumes could be issued bound in cloth, instead of stiff wrappers, it would be an advantage.

* "The Parish Church of St. Helen's," Bishopsgate. The Survey of London, Vol. IX. compiled by Miss Reddan and A. W. Clapham. (London. B. T. Batsford, Ltd.) Price Two Guineas.

The Death Watch Beetle.

Mr. Leslie Moore, the architect, recently suggested the use of a vacuum machine for the purpose of ridding Peterborough Cathedral of the death watch beetle. It is fitted with a special apparatus which extracts the beetle from positions otherwise inaccessible. This beetle has already caused the cathedral restoration committee an expenditure of £10,000.

LEWIS WAR MEMORIAL, STORNOWAY

THIS memorial takes the form of a Scottish baronial tower rising to the height of over 85 ft. The lower portion, 18 ft. square and strongly buttressed at each of the angles, reaches to a height of 21 ft., at which height the face width is reduced by intake courses, above which the walls rise uninterruptedly with a slight tapering to the parapets which overhang on triple coursed corbels. On three of the angles the parapet is further corbelled out into circular bastions, and on the remaining angle a circular turret containing a spiral stair gives access to the open platform within the parapets. This turret, with spiral stair, is continued up from the platform level a further height of 10 ft., and with an increased diameter, also terminates with a corbelled and embrasured parapet forming a flag turret, from the platform of which rises a strong steel mast, to which the lightning conductor is connected.

Lewis War Memorial, Stornaway.
MR. J. HINTON GALL, Lic.R.I.B.A., Architect

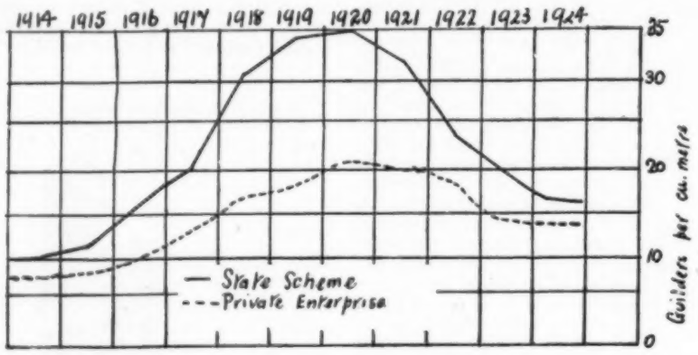
Internally, the tower is divided into an arched entrance chamber, 20 ft. high, and four upper chambers reached by square and circular steel stairs, until the granite turnpike stair is reached in the turret. In these chambers bronze panels containing the names of the fallen, numbering upwards of 1,200, belonging to the four parishes of Lewis, will be fixed—a separate chamber being allotted to each parish.

The entrance to the tower on the south face is by a richly moulded arched doorway containing a massive door of Scottish oak, above which are two moulded panels; on one is cut the dedication inscription in English, and on the other in Gaelic. All the dressed work is of fine axed Aberdeenshire granite, and the walls are of native rock (*gneiss*), while the floors are of reinforced concrete. The scheme cost—exclusive of bronze panels—over £4,300. The architect is Mr. John Hinton Gall, Lic.R.I.B.A., of Inverness.

HOUSING IN HOLLAND

At a recent international conference of hygienists in Holland, Mr. H. van der Kaa (Chief State Inspector of Housing) delivered an address on the progress of housing in the Netherlands from the beginning of the present century.

Soon after the outbreak of the war, he said, the prices of building materials began to increase, and building costs increased to such an extent that gradually the building of houses came to a standstill and the Government had to intervene and give assistance. This assistance was not given to private builders, who, until then, had always had a large share in the building of houses, but exclusively to public utility societies and local authorities for State-aided housing schemes. In 1916 the Government agreed to advance to public utility societies a yearly grant towards the building of working-class houses to an amount of half the difference between the annual loan charge and the annual loan charge that would have to be paid if the price of building materials had not increased since August, 1914; provided that the local authority should pay the other half of the difference. By this support the dwellings could be let for the same rent as if they had been built before the war. In 1917 the share of the Government was increased from one-half to 75 per cent. of the whole grant till December 31, 1921.



Cost of Erection of Complete Houses in Amsterdam

Housing regulations of the Government took no measures to prevent the cost of building from increasing, and the cost of building of a house in 1920 amounted to three times the cost in 1914; the yearly deficit on each house paid by the Exchequer amounted to 200 guilders, and in some cases it rose to 300 guilders. In 1919, therefore, the regulations were altered, and loans under the Housing Act were advanced at a rate of 5 per cent.; grants on behalf of material prices and rate of interest were done away with and replaced by a yearly grant towards any deficit. The yearly deficit was paid as to 75 per cent. by the Government and 25 per cent. by the local authority.

Rents of existing houses were fixed by the Rent Restriction Act on a low level, with the result that rents remained low and the deficit was paid by the Exchequer, so that this regulation did not prevent the building costs from increasing. In 1920 a minimum rent was fixed for every type of dwelling; for houses not above a cubic space of 225 m. the rent had to cover at least 30 per cent. of the yearly expenses; for houses of a cubic space of 225 to 275 m., at least 60 per cent.; for houses of a cubic space of 275 to 300 m., at least 70 per cent. It was, however, generally known that in case of a rise in building trade wages the Government would be willing to increase the advanced loans and grants, so this regulation had no influence on the rising building cost. Prices of materials began to fall in the course of 1920, but wages increased. The wages paid surpassed those stipulated by contract, and were much higher than the wages of skilled labourers in other trades.

The fall of building costs did not set in until 1921, partly owing to the limitation of the State aid for housing schemes. In 1922 the Government increased the rents of houses built at a time when house-building was not so expensive, in order to decrease the high grants which were required from the Exchequer. Moreover, for the advancing of a loan a stipulation was made that the cost of building should not exceed an amount separately fixed for each municipality, while the Government refused to take into consideration requests for raising loans or grants advanced under these stipulations. In this way building costs were forced down.

The continuation in the rise of building costs during 1917 and 1918 gradually prevented private builders from building houses for the middle classes, and the Government drew up regulations for subsidising the building of houses for the middle classes. For this purpose, in 1918, a subsidy was granted to local authorities, provided that the local authority granted to the party concerned a subsidy to an extent of four-thirds of the subsidy which the Government granted to the local authority. By a regulation in 1919 it was stipulated that a percentage ranging, as a rule, from 150 to 180 per cent. of the pre-war cost of building, had to be covered by the rent. The difference was granted as a lump-sum grant, and paid by the Government and the local authority in the proportion of 3 to 1. In these regulations, too, no measures were taken to prevent the cost of building from increasing, as the whole difference between the actual cost and a fixed amount was paid by the Exchequer. Consequently, the cost of building experienced an excessive rise in some cases. Only in Rotterdam had private builders built on any large scale; for the rest, only local authorities and public utility societies had built houses under this scheme.

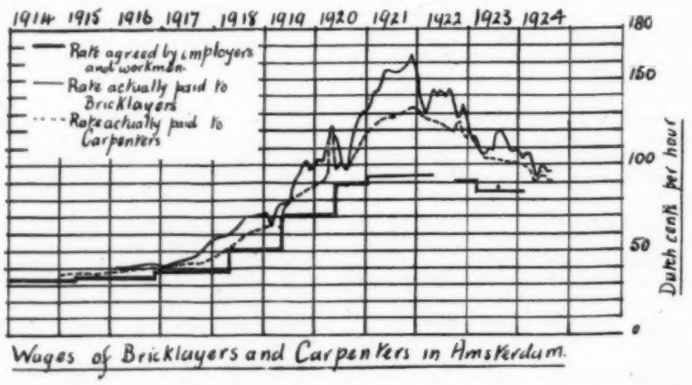
Since the increase of building costs set in, private enterprise was not able to carry on, as the subsidies granted to local authorities and public utility societies made it impossible for private builders to erect houses without subsidy. The supply of houses by private enterprise stopped, first for the working classes, then for the middle classes. The supply of dwellings remained entrusted to the public utility societies and the local authorities, but it became more and more obvious that they were not able to solve the housing emergency in a sufficient way. Experience had taught that private builders as a rule built quickly and cheaply, and the war years confirmed that in many cases local authorities and public societies lacked those qualities. It became more and more obvious that, without the help of private enterprise, it would never be possible to succeed in conquering the housing emergency. In 1920, therefore, a subsidy system was inaugurated by which grants and loans were advanced from the Exchequer. The grant was fixed at 20 guilders per square metre area of a dwelling up to a maximum of 2,000 guilders for each dwelling; the contents of a dwelling available for subsidy could not exceed a cubic space of 450 metres, measured outside above the ground floor level. If necessary a mortgage was granted, not exceeding 90 per cent. of the building cost without the grant, but including the value of the site.

The private builders' subsidy scheme was founded on the principle that the State granted a fixed sum to everyone who was going to build a house at his own cost and risk, the sum depending on the dimensions of the house. The grant was considered as compensation for the depreciation to be expected in the future. The private builder who obtained a grant was obliged to keep the houses available for habitation for at least 15 years, but for the rest he was allowed to sell or let. The grant was entirely paid by the Exchequer. The free hand for private builders proved to be an efficient means to make the private builders' subsidy scheme popular, and in a relatively short time a great revival of private enterprise was experienced.

The number of dwellings for which the private builders' subsidy had been made in 1921, 1922 and 1923 was 25,281, 29,946 and 33,366 respectively.

Altogether, since the Housing Act came into force 225,193 houses had been built by local authorities, public utility societies, and private persons.

On January 1, 1924, more than 27,000 dwellings were under construction. On April 1 1924, more than 12,000 dwellings were under construction without financial support. A complete revival of private enterprise, however is obstructed by difficulties as regards credit.



Wages of Bricklayers and Carpenters in Amsterdam

For this reason a number of local authorities had established a municipal mortgage bank, which granted credits and mortgages for building on municipal leasehold grounds. Another difficulty as regarded credit was caused by rent restrictions which depreciated the value of all dwellings, so that as a rule this value was lower than the actual building cost. In order to meet these difficulties the Government had resolved to supply second mortgages, while the builders must try to get their first mortgage in another way. The second mortgage would amount to 20 per cent. of the building cost and to the maximum of 600 guilders. The amount of first and second mortgage together are not to surpass 85 per cent. of the estimated cost of a completed house.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or better still, in typescript.—ED.

Made Ground.

[REPLY TO MR. SOUTH, NOVEMBER 14.]

SIR,—I think Mr. South is hardly in order in saying that the weight of the superstructure must be in accordance with the carrying power of the soil. As a rule an architect is given a site and a certain size of structure to place thereon, and it is part of his problem to so handle that superstructure that its weight is spread over so much of the soil as its strength or weakness demands, or alternatively to increase the bearing capacity of the soil by piling. It is possible to build soundly the same plan of building on a rock or a marsh. The difference will be that in the one case the rock will be levelled and the walls started direct therefrom, while in the other the weight of the building will be spread over a large area by means of a raft, or the ground consolidated by means or sheet piling.

First calculate the weights of the various parts of your building, then determine the bearing capacity of your ground, and treat your foundations accordingly.

"PRACTICE."

"Hot Plates."

SIR,—The question of adequate heating arrangements for plates and dishes on a gas cooker has reached a crisis, and is a source of mental trouble to many housewives who cook by gas! I should be more than obliged if any reader could help solve this difficulty. I am acquainted with many of the modern gas cookers, but excellent as they are in many respects, this lack of plate accommodation is very apparent. The usual space allowed is useless for anyone who values their dinner service. If a rack is fixed above the cooker, as far as I can see, very little heat reaches it. Is there any method of improving on this and so make cooking by gas a pleasure?

"BAFFLED."

Old Beams.

[REPLY TO "INQUIRER," NOVEMBER 21.]

SIR,—There are to be found some very useful hints on the restoration of old work in the R.I.B.A. pamphlet upon the Restoration of Ancient Monuments, issued from the office of that body, price 9d. "ASSOCIATE."

Damp Walls.

[REPLY TO "HOUSEHOLDER," NOVEMBER 21.]

SIR,—Your correspondent should consult a capable architect, in order that the real cause of the trouble may be correctly diagnosed and steps taken to remedy it. It is almost impossible to express an opinion from the data given, and it may be a most simple matter, such as an eaves gutter choked and splashing over, or an overflow pipe dripping, or merely a case for re-pointing a portion of the wall. Whatever it is, the cause must be removed and the wall allowed to dry out before wasting further money or re-plastering and re-decorating. "M.A."

Brick Footings.

[REPLY TO "PROVINCIAL," NOVEMBER 14.]

SIR,—In reply to "Provincial." The District Surveyor has no power in his own discretion to authorise the omission of brick footings.

Clause 9 of First Schedule to L.B.A., 1894, commences: "Unless with the consent of the Council every wall other than a wall carried on a bressummer shall have footings. . . ." Your correspondent's course would be to make application to the L.C.C. for its consent to the omission of the footings.

The writer recently endeavoured to obtain consent, amongst other things, to the omission of brick footings to simple one-story garages, without success. It has been repeatedly shown that footings may be safely dispensed with in many cases, and it is to be hoped that sufficient pressure will be brought to bear in the near future which will result in amendments to meet the economic and practical needs of the present day, and also to avoid glaring inconsistencies in methods adopted by authoritative bodies. Compare the law relating to footings under the L.B.A. with clause 37 of the standard specification for State-aided housing (*The Builder*, September 12, 1919):—

"Footings.—No brick footings are to be provided to any walls."

"LONDON."

Hollow Walls.

SIR,—The correspondence you are publishing with regard to defective hollow walls is timely, for I notice that a very large proportion of small houses are now being erected whose outer walls consist of two half-brick skins, bound together by "galvanised" iron ties. It is, of course, exceedingly difficult to get workmen to build such a wall well, for it is a matter which calls for much more care and thoroughness than the average workman is ever likely to give to it. In addition, there are the very considerable practical difficulties which occur at every point where there are windows, doors, &c.

But that is not all. The almost universally used galvanised iron tie is a perishable product. Everyone who has had experience of exposed galvanised iron knows that the ordinary commercial product can be given a life of ten years or less. I have known galvanised wire to lose its coating and rust in seven years. What is to prevent the galvanised tie from sharing the same fate, especially as mortar is almost invariably dropped on it to hold and convey water.

These things being so, I invite your readers to say what experience they have had of such hollow walls after a term of years. The subject is of great importance, for tens of millions of public money are being sunk in such walls. My own opinion is that, as usually built, they are unsound, but that careful building and the use of earthenware ties might completely change their character and make them desirable.

"L. C. M."

Church Buildings.

SIR,—I wonder if any reader could inform me of the current cost per cubic ft. of church buildings?

I have in mind the smaller type of brick-built church seating from 300 to 400.

"F. C. B."

Brushes.

[REPLY TO "NEMO," NOVEMBER 28.]

SIR,—No. You have clinched the bargain, which is supposed to include tear and wear of brushes and plant.

JOHN M. FIFE.

SIR,—Brushes would come under the head of plant, depreciation of which should be accounted for in the establishment charges, the percentage allowed for which should be largely assessed by previous figures of experience in the business. It is assumed that the agreed percentage of 15 per cent. was to cover builders' profit and establishment charges. I am afraid your correspondent will have to make up his mind to grin and bear the loss (surely a very slight one) into which his oversight has involved him.

"ARCHITECT."

Building By-laws.

SIR,—I shall be much obliged if any of your readers could kindly inform me whether a sectional wooden building standing upon the ground but not in any way attached thereto is generally regarded as being a "building" to which local by-laws relating to construction, &c., would apply. The building referred to is used as a garage, and is the property of the owner of the land. It could be dismantled and re-erected complete on other land if need arose. Would the position be in any way affected if the said building were standing upon wheels (of small diameter)?

Gloucester. "A. G. L."

A Damp Party Wall.

[REPLY TO "BUILDER," NOVEMBER 28.]

SIR,—"Builder" does not state where the property is situated. If in London, it would be controlled by Statute Law (The London Building Act, 1894) regarding party walls; but if outside London the local authority may have by-laws in force made under Section 157 of the Public Health Act, 1875, which would affect his case. The Common Law appertains everywhere unless superseded by Statute Law. There is no question that the wall dividing B and C is a party wall, being a wall of which two adjoining owners are tenants in common. Although, as is stated, the wall is on B's ground, it is nevertheless a party wall, and B is subject to an easement or right to maintain it in its nature of a dividing wall between the two tenements. There is also no doubt that the defective rainwater pipe is for the common use of both B and C, and although it also is on B's property, C has an easement over it by implied grant or reservation; and cannot be restrained from letting surface water from his house pass to and down it. Now it is stated that owing to the rainwater pipe being out of repair and becoming stopped, and the water from the roofs of B and C not being able to get away, injury to the party wall has been caused. On C's side papering, &c., is required to arrest the continuance of the damage.

The principle of contributions by adjoining owners to the expense of erecting a party wall depends at Common Law upon contract express or implied. In this case there is an implied obligation on the part of B to keep the rainwater pipe clear, and to keep the wall in repair on his side of it. Further, the damage on C's side of the wall being directly due to B's negligence, C can recover from present owner of B the loss incurred by papering, &c. B cannot so deal with his tenement as to render the easement over it incapable of being enjoyed by C, and although, in general, B is not bound to repair to ensure such enjoyment by C, here there are special circumstances which impose on B a duty to repair. The present owner of B could, of course, in turn recover from the previous owner of B, unless the former had had notice of the defects, &c., when purchasing. Portions of the party fence are stated to be set back on C's land; this does not cause C to forfeit his ownership of the piece of land so cut off; and since he also owns the fence (by whomsoever it may have been erected), he can, if he wishes, set back the fence to the true dividing line between the two tenements, if that, as it appears, can be distinguished.

"PARTY WALL."

SIR,—In my opinion, if conditions as shown on plans of "Builder" have existed for 20 years, "B" has an easement of roof drainage over "C's" roof, and "C" has an easement for discharge of roof drainage of "B" and "C" over "B's" land—unless the R.W.P. enters "C" premises before reaching the ground. The projecting portion of wall against which the R.W.P. is fixed is "C's" external wall, as are the back addition walls (presumably built in place of fence). "B" should allow the water to take its course to drain, as "C" cannot trespass; also by allowing the "pipe" to be impeded he is preventing the enjoyment of his own easement. "C" is responsible for con-

dition of the R.W.P. and for the pointing and papering. The light iron fence, if in existence in position shown for above-mentioned period, has given "B" the enjoyment of the extra strip and "B" is entitled to that enjoyment.

If these conditions have not existed for the above period "B" is trespassing on "C's" land at the rear. But the roof drainage must stand as the construction of "A," "B," and "C" as one block with roof drainage as existing cannot now be altered without the consent of all parties, and the sale or purchase no doubt provides for *status quo*.

G. G. WIMBOURNE.

Girders.

[REPLY TO MR. R. C. ARNOLD, NOVEMBER 28.]

SIR,—The perforation of the web of a girder at the point of maximum bending moment does actually reduce its resistance to bending, though to a very slight degree. A small area of the web is included in the section modulus of a section, though in rough and ready calculation, with no tables to which reference can be made, it is usual to neglect the web for this purpose. Actually that portion of a ½ in. web on, say, a 20 ft. span lost by such a 3 in. perforation would reduce the bearing capacity by about ½th of a ton. A similar perforation at the point of maximum shear would, however, reduce the bearing capacity of the girder by about 9 tons, so that the choice of position for the perforation is obviously the centre, or near it, of the beam. There is actually a position just off the centre of the beam on each side where the maximum efficiency might be secured both as to bending or shear, but the loss of efficiency against bending is so slight as to be almost negligible.

"TABLES."

SIR,—The correct cutting of the 3 in. hole in the joist depends upon the span. For example, assuming a 14 in. by 6 in. by 46 lb. section, the safe distributed load at 24 ft. span amounts to 13.1 tons, resulting in a shear stress of 6.55 tons. Calculating out the net web area after deducting for the 3 in. hole, we have 3.7 sq. in. to resist this shear. The allowable shear stress to resist web buckling amounts to 4.3 tons to the sq. in. times 3·7 area giving a safe carrying capacity of 15.9 tons, approximately 2.5 times actual load to be carried. The minimum span for cutting at the supports is 10 ft. If the joist is below this span and heavily loaded, inquirer's suggestion holds good; above 10 ft. span cutting away at the centre means a reduction in carrying capacity, admittedly small, being near the neutral axis of the section.

F. C. D.

Decay in Stone.

SIR,—I should be very grateful if you could inform me where I can obtain reliable information and help as to the best means of preserving stone against decay. I should prefer this to come from private sources rather than from a commercial firm interested in the subject.

"CONSTANT READER."

Thickness of Lead.

SIR,—Can you inform me of the respective thicknesses of sheet lead of 4 lbs., 5 lbs., and 6 lbs. weight, and also of the best method of measuring the same. It is a matter upon which a supervising architect can be very easily deceived if his experience is limited like my own.

"YOUNG ARCHITECT."

Wall Paper.

SIR,—I have been under the impression that wall papers are of a standard size of 12 yds. long to the piece by 21 in., and had ordered material accordingly, only to find myself sadly short on the job. I then discovered that the pieces were only 8 yds. long and 18 in. wide. Surely this is an unusual size?

"AMATEUR."

BUILDING CONTRACTS

CAPTAIN W. T. CRESWELL, Barrister-at-Law, recently gave a special lecture at the College of Estate Management on "Building Contracts."

A building contract or agreement was, he said, a legally binding instrument which had for its subject matter the conditions governing the erection of a building, and by which one person undertook, for a consideration, to erect for another person the said works in conformity with the said conditions. The terms "Contract" and "Agreement" had the same legal significance; but, in practice, "Building Contract" had come to be used where the work to be done was for the use and benefit of the landowner; whereas, when the intention was that a lease, or other interest in the land, was to be immediately granted to the contractor on completion of the building, then the instrument was called a "Building Agreement." The term "Contractor" was popularly applied only to persons in a large way of business, but legally, any person entering on a contract or agreement to carry out work, for a consideration, was a contractor.

The usual course was that the employer or prospective building owner invited lump sum tenders, providing plans, drawings and specification (and sometimes bills of quantities) giving full details of the work proposed, so that contractors might prepare satisfactory estimates for tendering. The most difficult task in preparing these estimates was to compute the "on costs" item. That was the sum required to be laid out before the actual work of construction began. The cost of labour, materials, and the contractor's profits were more easily ascertainable. In the case of a measurement contract the "on costs" must be proportionately distributed amongst the schedule items. There was ample opportunity for anyone who had the ability to do these things.

Tenders were legally "invitations to treat," or offers to receive offers, and did not bind the person inviting them. Therefore, though it was customary to state that the employer did not bind himself to accept the lowest or any tender, this precaution was not essential to his freedom to reject all. When the offer or tender had been sent to the employer, and he had accepted, and not until then, the contract became binding on both parties; the contractor might, however, recall his tender up to the moment when acceptance could be proved to have been sent or given to him. In order that a contract might be legally binding, the offer thereby defined and accepted must refer to a fixed consideration; though that consideration need not necessarily be of money, but might be wholly or partly of "kind." The exception to this rule, however, occurred when the contract was under the seal of a corporation, in which circumstances the remuneration or consideration need not be definitely named. If a date were named in the invitation, at which the offers would be accepted or rejected, the decision must be made promptly, or the tenders could be revoked. If no time was fixed, then only reasonable delay could be claimed, or the employer might for a further consideration contract for the holding over of all or any of the tenders received during the further period. Proof of posting a strayed or delayed letter of acceptance was final evidence; also, acceptance could be alleged if either party had shown by his conduct that he intended to accept. The same restrictions applied to revocation of a tender.

In a ruling case, Croshaw *v.* Pritchard, the contractor had sent in a letter headed "Estimate." Finding later that an error had been made, he sought to revoke his offer, as being only an estimate. The employer refused to comply, and was able, in an action in court, to recover from this contractor the sum in excess of this "estimate" which he, the employer, had paid to another contractor to complete the work. But release from a contract had been given by the courts where an error was of such magnitude that it was obvious to a reasonably minded person. It was always open to the contractor to include in his tender any additional conditions which should govern his carrying out of the work. If he tendered without reservation he was bound by the terms of the contract; if, on the other hand, the employer did not state his unwillingness to accept the contractor's conditions of service, these conditions became part of the contract.

A tender must be definite—for instance, if it were advertised that the lowest tender would be accepted, and a person offered to contract "at £200 less than the lowest named price," that was not a bona-fide tender; and the contractor, having named the lowest actual figure, could claim the job.

The documents at first laid before the contractor were not necessarily a formal contract. This document was often drawn up later—but all that was necessary, to establish the existence of a contract, was to prove that the parties had "a contracting mind" at a certain date. Misrepresentation by the employer or his authorised agent released the contractor from his bond; whilst acceptance by an unauthorised agent did not bind the employer. If an architect accepted a tender on behalf of a client, he should always state that a formal contract was to be signed later, and see that it was done. The stamping of contracts within prescribed periods was legally demanded, and a heavy penalty was imposed for non-stamping.

It was perfectly legal for several persons to confer amongst themselves and to arrange conditions whereby one of their number should tender, and the others abstain on condition that they should provide part of the work or materials asked for, or abstain altogether. So long only as their arrangements were not against public policy, or in restraint of trade, they were legally binding.

An interesting point was made in the distinction of "liquidated damages" and "penalties"—two terms often carelessly interchanged in building contracts. "Liquidated damages" were fines which could be, and evidently were, ascertained by the contracting parties before signing the contract. "Penalties" were fines of uncertain total and did not assess the loss, but were imposed as security for the due performance of the contract. Whichever term had been used in the phraseology of the contract, the court would, if necessary, correct it in conformity with these definitions. The point being that "liquidated damages" were recoverable in the exact amount named, whereas "penalties" might be recovered only on the assessment of the court in respect of the actual damage or loss sustained. In the penalty clause for delay in completion in a building contract, the fines should be called "liquidated damages," and in that case would not be interfered with by the court.

Town Planning.

The Ministry of Health state that in view of the general importance of town planning, not only to local authorities and their officials but also to private interests concerned in the development of land, the part of the Annual Report of the Ministry of Health for 1923-1924 which deals with this subject has been published separately.

The report contains a statement not only of the position of town-planning schemes throughout the country at the end of the year and of the progress of regional planning, but also of the attitude of the Ministry on a number of points of general importance which have arisen in connection with town planning and with appeals relating to proposed developments.

Copies of the publication may be purchased, price 6d., direct from H.M.S.O.

THE BUILDING TRADE

QUICK-HARDENING PORTLAND CEMENT

IN view of the great saving in time and, therefore, of money which could be effected if a cement were available which would harden more rapidly than the Portland cement we know to-day, a great deal of attention has been given to the production of a quick-hardening cement which would not be prohibitive in price for general building and constructional purposes. A considerable amount of research in this direction has been undertaken recently by cement manufacturers in this country, as a result of which the Cement Marketing Co., Ltd., of Portland House, Tothill-street, S.W.1, are putting on the market a new quick-hardening Portland cement of the "Ferrocrete" brand.

A series of tests on this new cement is now being undertaken at the City and Guilds Engineering College at South Kensington, under the direction of Professor Dixon. A number of beams and cubes were cast on Monday last week of best ordinary Portland cement and the new quick-hardening Portland cement, the programme being to test two of each type at ages of 2 days, 4 days, 7 days, 28 days, and three months approximately. The beams are 16 ft. long by 10½ in. deep by 6 in. thick for the purpose of the test, supported on knife edges at 6 in. from each end and the load applied at a point 2 ft. 6 in. each way from the centre. The beams were designed by Dr. Oscar Faber, O.B.E., D.Sc., and are reinforced with 1¼ in. rods.

The 2 days' and 4 days' tests were made on Wednesday and Friday last week, and the 7 days' tests on Monday last.

The average results of the beam tests so far carried out are approximately as follows:—

	Age 54 hours. lbs.	Age 100 hours. lbs.	Age 7 days. lbs.
Portland Cement	4,000	7,000	9,260
Quick-Hardening Ferrocrete ..	14,000	19,000	[21,000

The results of the tests on 6 in. cubes so f[ar] are approximately as follows:—

	Age 56 hours. lbs. per sq. in.	Age 100 hours. lbs. per sq. in.	Age 7 days. lbs. per sq. in.
Portland Cement	700	1,200	1,050
Quick-Hardening Ferrocrete ..	2,450	4,000	5,100

The beams and cubes were all made of a 4:2:1 mix by the same workmen and of the same aggregates, the only difference being in the cement.

It will thus be seen that the new quick-hardening cement under practical conditions gives a greater strength at 48 hours than is required by the British Standard Specification at 28 days, and as this is a true Portland cement its strength will undoubtedly be maintained and increased with age. It is an entirely British product, and the price, we understand, will be not more than 25 per cent. more than best quality British Portland cements. It is of interest to note that this new quick-hardening cement is being used by the Westminster City Council in Piccadilly, where the work of reconstructing part of the road foundation commenced on Monday; it is perhaps in road works that the greatest use will be found for the material, and the inconvenience caused by roads being "up" for lengthy periods alleviated, for with such a cement it would be possible to lay the wood blocks or other surface the day after the concrete has been placed. In building construction, too, a cement with such rapid-hardening properties should permit of more speedy erection in many directions, and is likely to give an impetus to reinforced concrete construction, which has hitherto been somewhat handicapped on account of the time required to allow shuttering to be removed.

APPRENTICES IN THE BUILDING INDUSTRY

THE following scheme for the training of apprentices in the building industry was submitted by Councillor Mitchell (Manchester City Council) to a Conference of Lancashire and Cheshire local authorities, and has now the unanimous approval of conferences organised by the National Housing and Town-Planning Council, representing Yorkshire, Lancashire and Cheshire, Midlands, North-East Coast, and the West of England.

The objects of the scheme are to co-ordinate by means of a committee the functions of the local education authority as to the technical training of youths entering the building industry with those of the Manchester, Salford and District Building Trades Apprenticeship Joint Committee, and to secure (*a*) the efficient training of apprentices in both the theory and practice of the craft, and (*b*) the continuance of such training through all the stages of apprenticeship.

The scheme would be controlled by a committee consisting of twenty-four representatives, selected as follows: (*a*) Four to be appointed by the Education Committee of the Manchester City Council; (*b*) sixteen by the Manchester, Salford and District Building Trades Apprenticeship Joint Council; (*c*) four by the Housing Committee of the Manchester City Council.

The committee would from time to time consult with the Manchester, Salford and District Building Trades Apprenticeship Joint Council as to the number of apprentices required to be trained in the several branches of the industry, and of the steps to be taken to secure the necessary number of apprentices. They would also keep a panel of employers willing to train apprentices, and advise as to the conditions of apprenticeship and agreements between employers and indentured apprentices. The number of apprentices to be trained under the scheme in any one year would be estimated annually by the committee, who would have power to make arrangements for securing the objects of this scheme as they might deem necessary.

The scheme would be available to youths resident within the City of Manchester between the "school leaving age" and 20 years. Youths under the age of 16 would be required to serve a probationary period of not less than six months before articles of apprenticeship were completed. Applicants before being admitted as probationers would satisfy the Committee of their fitness for the craft selected, and afterwards the Education Committee of their ability to benefit by the technical education to be provided. Youths desiring to enter the industry after attaining the age of 16 would satisfy the committee of their ability to become efficient journeymen within a period not exceeding four years from the date of their apprenticeship.

Training would be available as follows: (*a*) Technical training provided by the Manchester Education Committee under the Regulations of the Board of Education; and (*b*) practical training provided by employers.

Youths admitted under the scheme would observe the following conditions, namely: (*a*) Attend on days required at the centre where technical instruction is to be given; and (*b*) become indentured as the committee may approve, abide by the terms of such indentures, and where necessary be willing to be transferred to another employer as the committee might determine.

The apprenticeship period, in the case of youths under the age of 16 years, would begin at the end of the probationary period, and in other cases on such date as the Committee might determine. The rate of pay for probationers and apprentices would be that fixed by the Manchester, Salford and District Building Trades Apprenticeship Joint Council. Where the application of a youth above the age of 16 years were approved, and he was subsequently indentured, the rate of pay might be varied by arrangement between the Committee and the Joint Council.

No apprentice would be required or permitted to work overtime during the first three years of his apprenticeship, or when his attendance at a centre of instruction was required, and in no case until he had attained the age of 17 years, or contrary to the decision of the Joint Committee. Where overtime was worked the apprentice would be paid for the time worked at a rate proportionate to the increase allowed to journeymen in the same craft.

The rate of wages would start at 10 per cent. of the journeyman's rate at the age of 14 years, increasing every six months until 70 per cent. of the journeyman's rate was reached at the age of 21 years.

NATIONAL HOUSE BUILDING COMMITTEE

THE Ministry of Health state that on November 27 the Minister of Health and the Secretary for Scotland received a deputation from the National House Building Committee that was set up by Mr. Wheatley to assist him in carrying out the scheme embodied in the Housing Act of last Session. The deputation consisted of: Messrs. W. H. Nicholls, Barron, Strange, Coppock, and White.

Mr. Nicholls, on behalf of the deputation, said that their object in seeing the Minister was to discover whether they wanted the Committee to continue in being and carry on the work of arranging for the augmentation of skilled craftsmen in the building trade, with which they had already made considerable progress. They felt themselves that it was useless for them to continue in being if the Government contemplated any sudden reversal of housing policy or any slowing down of the provision of houses. On the other hand, they felt that they could make a valuable contribution to the solution of the housing problem if the present Government intended to carry on in its essentials the scheme which had been started by the late Government.

Mr. Chamberlain, replying to the deputation, said that he thought nothing was more likely to hinder an early solution of the housing problem than a series of sudden reversals of policy, and he did not contemplate making any violent changes in the existing legislative provisions. There was no question that the provision of houses must be pressed on as rapidly as possible, and the immediate problem was the augmentation of the supplies of labour and materials. To this end he agreed that the Committee could make a valuable contribution, and while thanking them for the work that they had already done he assured them that he was most anxious for it to continue and would give them every support possible. The question of the progress that had already been made and the contemplated procedure was briefly discussed.

New Stirling Infirmary.

Proposals for a new infirmary for the town and district were made at the annual meeting recently of subscribers to Stirling Royal Infirmary. Mr. James Millar, architect, reported on a plan for extending the present infirmary by taking in the Girls' Industrial School and grounds; the estimated cost of the scheme was from £40,000 to £45,000, and the extension, when completed, might only suffice for the needs of the district for fifteen or twenty years. The question of an entirely new infirmary on a new site was then faced, and the cost ascertained to be from £65,000 to £70,000, exclusive of the cost of the site. After a full consideration of the schemes, the directors recommended the adoption of the larger proposal, being convinced that only in this way could they meet the needs of the district. The meeting unanimously approved of the scheme outlined by the directors.

PUBLIC WORKS AND THEIR CONSTRUCTION IN WINTER

By G. M. FLOOD, B.Sc.Eng., A.M.Inst.M. & C.E.

In view of the fact that public works form more than 25 per cent. of all construction, their proper control is therefore of the greatest importance in any programme to distribute general constructional activity more evenly throughout the year. The essential requirement for a good public policy is that contracts for public works should be let when the work can be performed economically and with the least possible interference with private construction. On analysis, it will be found that public improvements are rushed right along in the peaks of the annual building season, and further, that many public works are initiated without regard to the private demands upon the building and constructional industries.

The execution of public works is well adapted for long-range planning, for expansion in years of depression, and for slowing up in years of general business activity. It is equally possible and most desirable that public works should be planned with special regard to seasonal conditions, and that all work which is not urgently required be either held up until the peak season is passed, or started early enough to take advantage of the general mid-winter slump. With the intelligent use of new methods of construction and of protection of both men and buildings during the winter season, much of this work is well suited for economical prosecution during the winter season. That work which is not suitable to carry on actively during winter weather can still be planned so as to proceed at maximum capacity during the intermediate months rather than during peak periods in private work.

With reference to seasonal conditions, one obstacle that has been found to prevent such conscious scheduling is the limitation imposed either by statute or customary procedure in preparation for public works construction. Thus, where work is dependent upon legislation through Parliamentary agents and is dependent upon a Royal Assent, or by the simpler procedure, *i.e.*, a provisional order of the Board of Trade, it may not be invested with the authority of an Act of Parliament until late in May or June, and the work, if carried forward promptly, is likely to come within the peak of private building activity.

In many other instances the number of necessary legal steps which must be taken before the work can commence, and the length of time either required by law or made necessary by the procedure itself, so delay the work that it is considered necessary to rush it on to completion as rapidly as possible after the awarding of the contract. In cases of this sort, if the procedure could be simplified, or if each step were not dependent upon a preceding step, this delay would be eliminated and time enough remain so that construction could be scheduled from a seasonal standpoint and, though sometimes stretched out over a longer period, still permit completion at a date as early as under present practice. A very definite step to improve such situations is the provision, either general or specific, that funds be made available to administrative officials for the preparation of plans and specifications well in advance of the time actual construction is to begin, in order to reduce the delay after the appropriation is made.

The public administrative officials in charge of construction works can play an important part in making such changes as are indicated by the needs of economy and employment. Foresight in planning the work, the collection and use of information showing exactly what the seasonal trend is in construction of that particular kind, and the efforts made to change customary or legal requirements which operate to accentuate the seasonal tendency in their construction work, are having a considerable influence in the right direction. If the administrative officials in charge of public works construction were possessed of discretionary powers governing both the letting of the contract and the time limit within which work must be completed, they could effectively be made responsible for the practice of economies and the pursuit of a policy of relieving unemployment through the best timing of the work. Contractors on public works, as well as those on private work, can greatly assist by making a thorough study of the most successful methods employed in winter construction as well as of the problems of management and organisation involved.

Where there are opportunities to take advantages of lower prices of materials, and where greater efficiency is secured from labour during times when employment is less plentiful, the contractor has it in his power to encourage public work in off seasons by passing on these benefits in the form of lower bids. Since his overhead cost per job or unit of work is considerably lessened when his organisation is kept together throughout the year and his machinery and equipment are idle for a shorter period, he can, by taking on winter work, cut his customary margin of profit and still make more money as a result of the full year's work. Contractors, by their general attitude, their willingness to take work during the winter and perform it satisfactorily, and probable lower bids and other inducements, can exert a considerable influence upon the officials with whom contract letting rests, to the end that work shall be timed when it can be carried out most economically.

Amended, revised and new legislative measures will play an important part in bringing about a change in the present methods of handling public construction jobs, and it is only reasonable to assume that with stable government the Public Health Act and the various amending Acts will be revised, amended and consolidated with the Housing and Town-Planning Acts into a simple legislative measure, as near perfect as a combination of legal, engineering and architectural minds can bring it, *i.e.*, a "National Health Consolidation Act."

Where continuing appropriations for a particular kind of work are required in order that such work may be intelligently scheduled to come as largely as practicable in slack seasons, they should be provided. In some cases the granting of greater discretionary powers to the administrative officials in charge of work is needed, and where the legal requirements surrounding the methods of contract letting are unnecessarily complicated or obsolete active steps should be taken to change them. In cases of cities where construction funds are not available until the beginning of a fiscal year, or where construction work is dependent upon the Ministry of Health granting the necessary powers to obtain a loan, at a time which makes contract letting coincide with the peak in private letting, provision should be made for contracts to be let and work to start before the beginning of the fiscal year when the money is to become available.

Where changes are advocated by administrative officials in order to allow them to schedule their work more effectively, attention should be given to the seasonal conditions in question, and every possible allowance made, so that the construction year may be lengthened. In this problem of the seasonal aspects of public construction works the attitude of the general public is of the utmost importance. It is the general public which pays the bills for expensive construction during peak periods, and which suffers because of unemployment in slack times. An active interest in the whole subject, and realisation of the large losses and waste involved in a seven to ten months' building year, should result in bringing sufficient weight of opinion to bear, so that all concerned will be forced to accept the new viewpoint.

The leadership of civic bodies within the community, and of newspapers and other public agencies, would help in moulding and crystallising public sentiment, and would result not only in lower costs of construction and more efficient work, but in lessened unemployment during slack seasons, and in the elimination of such wasteful competitions for labour and materials between public and private works as was witnessed during the past two or three years every time the words "Government subsidy" were mooted. While public buildings and works for the use of the State and local governments are subject to the same climatic limitations as private buildings and works, and, in addition, to limitations governing the authorisation and expenditure of money, this field contains probably the best possibilities for off-season construction. Although the amount of building of this kind is small when compared with the total of all kinds of construction, yet the erection of a large public building in a small community is likely to have an important influence for stabilising construction.

The result of public buildings so planned would be more economical construction for both the public and the private builder, lessened overhead costs, actual savings to the ratepayers, and diminished unemployment in the community during the winter period. Here is a case where the real remedy lies in influencing the point of view of the public and of the legislative bodies and officials directly in charge of this construction work. Contractors who do this kind of work, ratepayers and civic organisations, and individuals, can all help to develop this point of view. The effect of such work carried on at the maximum possible speed during the winter, and slackening up when private demands are greatest, would be very important, since men are employed who would otherwise be idle at one period of the year and are released for other purposes during the busiest season.

The construction of sewers and waterworks systems is another important type of public works in cities. This work is entirely out of doors and subject to the fullest extent to weather conditions. The argument of the severity of the climate is generally advanced as making impossible the successful prosecution of such work during the winter, but a number of cities with the most rigorous climates have a contrary experience. The favourable experience of these latter cities seems to indicate that there are different points of view and different experiences in conducting the same work under similar conditions. This appears to show that the habits of the contractors and the attitude of those in charge of the work need to be changed in order to carry on winter work of this kind successfully. That it can be done successfully is shown by the cases mentioned above.

Until methods are changed as a result of experience, it is not unlikely that experiments might not prove wholly successful. With more experience to draw upon, with labour adapting itself to new conditions, with the more extensive use of modern machinery for excavating, back filling and work of that kind, and with increased understanding of the public policy served, it is probable that most of our cities could successfully carry on this work throughout the year. Even in the cases where it is not desired actually to carry on outdoor work during a period of two or three months, a great deal can be accomplished adopting a properly organised programme.

During the winter months the contracts for the pipes, special castings and machinery can be let, so that delivery is made in whole or in part during the winter months. Contracts for pipe laying, building foundations, etc., can be drawn up during the winter, so that after materials are received work may be started as soon as the season will permit. Where it is definitely known that a certain piece of construction is to be carried on in spring, it is highly desirable that arrangements be made and orders given during the winter for the sup-

plies of pipe and other materials that will be needed.

This not only has the effect of enabling work to be started as soon as the season will permit, but it has far-reaching effects in enabling pipe and equipment manufacturers to carry on their work more fully during what is ordinarily an off season. In the case of cast-iron pipe, at least, the winter is the most efficient manufacturing season, and a policy of winter ordering would have far-reaching results. This is a case for the attention of those immediately in charge of public works of this character, and also of those administrative officials who shape the policies of their departments. Some effort is bound to be required to change existing habits, but if the experience of some cities is a true guide the effort thus spent will have a widespread beneficial effect.

It is certain, however, that the problems of administration, the training and organisation of labour, the necessity for revised and amended legislative measures affecting construction, the proper control of contract letting, so that public and private works can be economically constructed, must be thoroughly studied and applied by the Government and local government departments concerned if sufficient progress is to be made in the extremely acute question of national housing.

Building Labour Augmentation.

At a recent meeting of the L.C.C. Major Barnes moved that it be referred to the Housing Committee, the Education Committee, and the Special Committee on Unemployment to consider and report, in view of the deficiency of skilled labour in the building trades and the continued prevalence of unemployment in other trades, what action the Council can take, in co-operation with the building trade employers and operatives or otherwise, to augment the supply of skilled labour in the building trades available for the building of houses under the Housing Acts.

TEMPORARY BUILDINGS

MR. PERCY C. CULVER, of Messrs. William Harbrow, Ltd., recently read a paper at the Northern Polytechnic on this subject. The lecturer first defined a temporary building as one which did not conform to the statutory requirements of the London Building Acts in London, or to the local by-laws elsewhere, so far as these by-laws related to construction. Buildings in this category could be erected under licence granted usually for three to five years, renewable at the discretion of the local authority. Temporary buildings, the lecturer stated, were popularly described as wooden huts or tin buildings and, therefore, it was well to recognise from the commencement that there were several classes of these buildings, ranging from those whose purpose would be filled in a relatively short time to others which were required for periods of fifty to sixty years. This difference in purpose led to substantial differences in construction, and to indicate these variations temporary buildings were classified under the following headings:—(*a*) The entirely timber building; (*b*) the iron building, which was a timber or steel fabric covered externally with galvanised steel sheeting; (*c*) the composite building, either constructed wholly of timber or a combination of steel stanchions and trusses and timber intermediate framing. In each case the framing forming the external walls would be covered with weather boarding, asbestos sheeting, plaster slabs, or lath and plaster, the internal walls and ceilings being finished with plaster slabs, lath and plaster, asbestos sheeting or one of the many types of wall boarding on the market. The roof of such a building would be covered with asbestos slating, ordinary slating, or red earthenware tiling; (*d*) the semi-permanent building, constructed with a skeleton framing of steel stanchions and trusses, and a filling to walls of 4½ in. brickwork or breeze concrete blocks. The roof would be covered with materials similar to those described under the heading of (*c*)—composite building.

In dealing with (*a*)—timber buildings—the lecturer referred to the fact that many examples of old timber buildings existed, constructed of English oak framing, weather boarded sides, and thatched or tiled roofs, and that some of these buildings had been in existence for more than 200 years.

In dealing with the iron building, the lecturer stated that the patenting of galvanised corrugated iron sheeting about 1829 quickly led to its adoption as an external covering. In modern practice the original iron sheet had given place to steel, and he had many experiences—some quite recently—where galvanised iron sheeting had been fixed for some forty years, and after being removed was found to be in extremely good condition. He pointed out the necessity for proper maintenance of the sheeting by regular painting, the length of the intervals being governed by the situation of the structure. Notes were given on standard practice in the proper fixing of this material and attention was drawn to the methods employed to prevent the entry of water over the heads of doors and windows, &c., and the methods employed in forming valleys in the roofs, fixing of skylights and ventilators.

After referring to the great variation between the weight of a brick wall and that of the wall of an iron building, the lecturer proceeded to deal with the question of foundations required for such a structure, and pointed out various methods which could be adopted which, whilst being economical in cost, permitted conformity with the various by-laws, this being specially necessary in cases where 6 in. of concrete over the site was obligatory. For buildings required only for a short period creosoted plates were mentioned as being sufficient. As conducive to economy and speed, the use of light cast iron columns was recommended where concrete over the site was a necessity.

Taking, as a basis, a hall measuring 60 ft. by 30 ft., a description was then given of the various sizes of scantling timber required in the construction of the walls, roof trusses, purlins, &c., mention being made of the various ways in which the timber framework could be prepared. It was emphasised that the standard practice of morticing and tenoning the framework was particularly advantageous in allowing the framework to be erected with the use of relatively few nails, and upon being dismantled the value of the timber would be greater than if the framework had been entirely nailed together. Where the mortice and tenon method was employed for buildings which had to be erected by foreign workmen abroad, a careful system of marking (which conformed to key plans) enabled those erecting the building to proceed without greater difficulty than a child building up a simple picture with blocks. Attention was directed to the advantage of employing three thicknesses of timber in the construction of "built-up" tie beams and principal rafters for large spans, with the main posts formed of two scantlings blocked apart to form a seating for the tie beams; also to the fact that owing to trade conditions the cost of steelwork varied considerably from time to time, as compared with the cost of timber, and that it was important (where fire risks or other special conditions did not demand steel trusses) to consider the relative costs, the speed of manufacture, and other points of comparison between the steel and timber trusses for larger spans.

The advantages of the various materials of the composite buildings were explained, particular attention being drawn to the importance of the use of a backing board to all asbestos sheeting when used as an external covering. The economical advantages possessed by the semi-permanent building, as well as the gain to be obtained in the time required for construction were fully dealt with. The present need for economy emphasised the advantages of such buildings and enabled them to fulfi successfully many purposes for which heavier constructions had been hitherto adopted.

COMPARISON OF PRICES OF BUILDING MATERIALS BETWEEN AUGUST 4, 1914, AND DECEMBER 1, 1924

Material.	Aug. 4, 1914. £ s. d.	Nov. 11, 1918. £ s. d.	Nov. 1, 1924. £ s. d.	Dec. 1, 1924. £ s. d.	Rise or Fall during Month. (Per cent.)
Bricks—					
Best Stocks	1 16 6	3 3 6	4 3 6	4 3 6	—
Flettons	1 14 0	2 7 8	2 13 3	2 13 3	—
Glazed	13 0 0	17 17 6	23 0 0	23 0 0	—
Thames Ballast	5 9	17 0	10 6	10 6	—
Thames Sand	7 3	17 0	15 6	14 6	−6.45
Shingle (¾ in.)	—	15 0	14 0	12 9	−8.93
Portland Cement	1 17 0	3 8 0	2 18 0	2 18 0	—
Ground Blue Lias Lime	1 0 0	2 2 6	2 4 6	2 4 6	—
Grey Stone Lime	1 8 0	2 7 0	2 11 9	2 11 9	—
Bath Stone	1 7½	1 7	2 9½	2 9½	—
Portland Stone	2 4½	2 10½	4 4	4 4	—
Good Sound Building Timber—					
4 in. × 11 in.	16 10 0	53 0 0	32 0 0	32 0 0	—
3 in. × 7 in.	13 0 0	46 0 0	23 0 0	23 0 0	—
3 in. × 11 in.	15 0 0	50 0 0	28 0 0	28 0 0	—
2 in. × 11 in.	—	51 0 0	28 0 0	28 0 0	—
2 in. × 7 in.	—	46 0 0	23 0 0	22 0 0	−4.35
3 in. × 4 in.	—	—	24 0 0	24 0 0	—
Slates—					
24 in. × 12 in.	—	—	37 12 6	37 12 6	—
22 in. × 12 in.	—	—	34 0 0	34 0 0	—
20 in. × 10 in.	—	—	25 12 6	25 12 6	—
16 in. × 10 in.	—	—	17 12 6	17 12 6	—
16 in. × 8 in.	—	—	13 15 0	13 15 0	—
R.S. Joists	9 10 0	—	13 10 0	13 10 0	—
Iron—					
Common Bars	9 0 0	16 10 0	13 10 0	13 10 0	—
Mild Steel Bars	9 5 0	21 0 0	12 0 0	12 0 0	—
Steel Bars	9 5 0	19 10 0	12 10 0	12 10 0	—
Cut Nails	11 10 0	29 0 0	20 10 0	20 10 0	—
Sheet Lead	22 15 0	40 0 0	47 10 0	51 0 0	+7.37
Glass—					
15 oz. Sheet	2	7	3¾	3¾	—
21 oz. „	3	8	5	5	—
26 oz. „	3¾	9	6	6	—
Raw Linseed Oil	2 4	8 4	4 4	4 4	—
Turpentine	2 6	11 0	5 7	5 5	−3.00
Ground English White Lead	30 5 0	60 10 0	57 0 0	59 0 0	+3.51
White Lead Paint	—	83 10 0	79 5 0	81 5 0	+2.52
Red Lead	28 10 0	47 0 0	47 10 0	52 10 0	+10·52

NEW BUILDINGS IN LONDON.

Euston-road.—A new public market is being built on a site in Euston-road, N.W.1, on the corner of Mabledon-place, with frontages of 280 ft. and 90 ft. respectively. The construction will be in brick on a steel frame. The roof will be in three spans and will be of asbestos cement tiles with patent glazing on the peaks of the roofs. The floors will be of concrete. Four entrances will be provided, fitted with collapsible gates. Glazed bricks will be used round each entrance, and along the lower part of the exterior walls. The upper part will be cemented. Parallel and transverse gangways will divide up the interior and there will be accommodation for 154 stalls. Water, sewerage, gas, and electric lighting will be laid on. Lavatory accommodation for both sexes will also be provided. The general contractors are Messrs. Kirk & Randall, Ltd., of 146, Grosvenor-road, S.W.1. The steelwork is being supplied and erected by Messrs. The Aston Construction Co., Ltd., Eagle Wharf-road, London, N.1. The electric lighting installation is being carried out by Messrs. Cecil Cooper & Co., Ltd., 14, Gloucester-road, S.W.7. Sanitary fittings, &c., are being supplied by Messrs. Stitson, White & Co., 102, Victoria-street, London, S.W.1. The architect is Mr. S. Gordon Jeeves, 4, George-street, Hanover-square, London, W.1. The quantity surveyor is Mr. W. H. Webber, 33, Furnival-street, London, E.C.4.

Regent-street.—New premises are to be built for the American Shoe Company in Regent-street, W.1. One section of the building is being carried out, and it is expected that work on the remaining portion will be started shortly. The new building will comprise shops and showrooms on the ground and first floors, with basements for storage, and five upper floors, suitable for offices, &c. Elaborate show and shop window fronts will be fitted, executed in bronze and art metal work and bordered in marble. The remainder of the principal elevations will be of Portland stone. The floors will be all carried on a steel framework and will be of fireproof materials. Heating, electric lighting, vacuum and sprinkler systems will be installed. The roof will be covered with slates placed on a concrete covering. The general contractors are Messrs. the Monnoyer British Construction Co., Ltd., of 6, New Burlington-street, London, W.1. The steelwork will be supplied by Messrs. The Astor Construction Co., Ltd., of Eagle Wharf-road, Hoxton, N.1. The architects are Messrs. Henry Tanner, of 3, Hanover-square, London, W.1.

Thornton Heath.—Funds are being raised for the provision of a new Wesleyan Church School at Thornton Heath, Surrey. It is contemplated to raise sufficient money to erect a building to accommodate about 500 children. A brick building, with slated or tiled roof and wooden floors, with central heating, and electric light, is suggested, costing about £5,000. Plans have been prepared by Mr. F. P. Bailey, 17, Norman-road, Thornton Heath.

King William-street.—It is proposed to erect a large office building on the vacant site in Arthur-street and Miles-lane, King William-street, E.C.2, to be known as "Arthur House." The new building will be erected on a steel framework with elevations in Portland stone. There will be five main floors with a further story in a mansard roof, which will be covered with concrete and Cumberland slates. Heating and hot-water supplies, electric lighting equipment, &c., and passenger and goods lifts will be installed. The architects are Messrs. Gunton & Gunton, of Finsbury House, Blomfield-street, E.C.2. The site covers an area of 16,000 square ft., and the estimated cost of the building is £130,000.

Harrow.—The proprietors of the *Harrow Observer* propose to extend their premises in Station-road, Harrow. The new block will be of three stories and will be erected in brick with a certain amount of steelwork to carry the principal loads. The frontage will be about 20 ft. and the area will extend back to 60 ft. from the road. A shop front will be installed on the ground floor. Wood blocks will be used on the ground and top floors, with ordinary wood boarding for the first floor. Electric lighting and central heating will be installed. Extensive top lights will be fitted into the roof. The architect is Mr. S. Poynton Taylor, of Roxeth Hill, Harrow.

Ebury-street.—A new building is to be erected alongside the Goring Hotel, in Ebury-street, Victoria, S.W. 1, as an extension of the hotel. The addition will cover an area of about 1,200 sq. ft., and will have frontages both in Ebury-street and in Victoria-square. A brick structure is to be evolved, so as to be in conformity with the existing hotel, with the introduction of stone dressings for doorways, cills and jambs to windows, strings, cornice, &c. Steel frame work will carry the weight of the building and the floors, which will be of reinforced concrete. Electric lighting and power will be introduced, and heating and hot-water services laid on. A service lift will run between the kitchens and dining room. The architects are Messrs. Giles, Gough & Trollope, of 28, Craven-street, Strand, London, W.C.

Bishopsgate.—New headquarters are to be built in Bishopsgate, E.C. 3, for the Hudson's Bay Co. The site has a frontage on each side of St. Helen's-place, and the feature of the new building is the arched entrance-way into St. Helen's-place. The plans show a block of premises extending to seven stories, with basements requiring excavation to a depth of 40 ft. A comprehensive hot-water heating system, operated by oil-fired boilers, will be installed. Two back hoists are also provided for. The elevation to Bishopsgate will be carried out in Portland and Bath stone, richly carved and chased and ornamented with bronze art metal work and castings. The steel work will amount to about 1,000 tons. The windows will mostly be of steel. The roof will be partly asphalted and partly slated, and will also contain two large water tanks. The interior woodwork will be carried out in Italian, Burma, Austrian, and English hardwoods. Ventilation will be provided by an air-washing plant, and wiring for vacuum cleaner installations will be made. The electrical installation will include lighting and power, telephones, burglar and fire alarms, clocks and bells. The floors will be of fireproof, hollow tile ware, reinforced with steel and levelled with concrete. Three large ornamental lamps and a two-dialed clock will be fixed to the street frontage. The architects are Messrs. Mewes & Davis, of 22, Conduit-street, London, W. 1. The consulting engineer is Dr. Oscar Faber, of 5, South-street, Finsbury-pavement, E.C. 2.

Leadenhall-street.—Work has started on the foundations for the new building in Leadenhall-street and Lime-street, E.C. 3, for the Corporation of Lloyds. The site, which covers an area of about one acre, has now been cleared of old buildings, and the first contract—for the foundations—has been given to Messrs. John Mowlem & Co., Ltd., of Ebury Bridge-road, Westminster, S.W. 1. The new building will be of six stories and two basements will be constructed below ground. A steel-frame building is proposed with the street frontages executed in Portland stone. The architect is Sir Edwin Cooper, F.R.I.B.A., of 4, Verulam-buildings, Gray's Inn, London, W.C.

Regent's Canal.—The Gas Light and Coke Co are to construct a large coaling wharf on the Regent's Canal Dock, to be equipped for unloading colliers, &c. Plans have been prepared by Messrs. Rendel, Palmer & Tritton, of 12-14, Dartmouth-street, Westminster, S.W. 1, for a structure, with a deck of reinforced concrete, supported on steel cylinders, filled with concrete, resting on a gravel foundation. The wharf will be nearly 200 ft. long and will be equipped with two electrically-operated coal transporters, fitted with grabs.

Golder's Green.—Among the building work proceeding at Golders Green is a scheme for the erection of two blocks of shops and flats in Finchley-road. Each block will consist of eleven shops, over which will be two stories of flats. The buildings will be in brick with best facing stocks and stone dressings for the street elevation. The floors will be of concrete and the roof will be flat and asphalted. A balustrade will run along the top of each block, the total cost of the proposal being about £30,000. The architects are Messrs. North, Robin & Wilsdon, of 35-39, Maddox-street, London, W. 1.

Exhibition-road.—A large site in Exhibition-road, South Kensington, S.W. 7, has been chosen for the erection of the new Geological Museum, which is at present housed in a building off Piccadilly, W. 1. The new museum will be of a building of three stories and basement, and will be carried out in Portland stone, its architecture conforming to that of the adjoining Natural History Museum. The roof will be flat and asphalted. Large lantern lights will illuminate the upper floor. The Government have already voted a provisional estimate of £270,000 towards the cost, and plans are now being prepared by H.M. Office of Works, at Storey's-gate, Westminster, S.W. 1.

Regent-street.—A large block of shops and offices and showrooms is to be built on the site in Regent-street, W. 1, at Nos. 91-93. A fire-proof building of six floors and basement, with a Portland stone front elevation, confined to the Crown's Reconstruction Scheme for this thoroughfare, is proposed. The construction will be on the steel frame principle and all floors will be of hollow tile and concrete. The roof will be of Mansard type, of concrete and asphalte, covered with Westmorland slates. The interior of the ground floor will be richly treated by fibrous plaster decorations, and will be fitted with art metal shop fronts to suit the incoming tenants. The upper floors will be finished in plain plaster and distempered. The windows will all be of the steel or cast-iron type. A separate entrance will be provided, to give access to the upper stories, and a lift will be fitted. Electric lighting, central heating, and vacuum cleaning plant will be installed. Pavement lights will be provided for the basement which, together with the foundations, will be of reinforced concrete construction, finished with asphalte. The architects are Messrs. Yates, Cook & Darbyshire, of 43, Great Marlborough-street, London, W. 1. The contractors will be Messrs. Arthur Vigor, Ltd., of 20, Knightsbridge, London, S.W.

Hammersmith.—It is proposed to demolish the present licensed premises in Dalling-road, Hammersmith, W. 6, owned by Messrs. Courage & Co., Ltd., and to erect an entirely new and modern public house, to be called the "Prince of Wales." The cost of the proposed new premises is £10,000. Brick will be principally used for the exterior walls, whilst the pitched roof will be covered with tiles. Accommodation will be allocated to a private and saloon bar. several public bars, and a luncheon room. The joinery and counter and partition work will be carried out in mahogany and other hard woods, whilst the flooring will also be of wood. Cellarage will be provided and a damp-course laid. Electric lighting will be used. Plans have been prepared by the owners' architect, Mr. E Kirby.

Cornhill.—A block of office premises are to be built on the site of Nos. 45, 46 & 47, Cornhill, E.C. 3. A building of five stories and basement with a frontage of about 65 ft. is proposed. The elevations will be carried out in Portland stone with a granite base. The floors will be of fireproof construction. The ground floor will have a height of about 17 ft. Central heating and electric lighting will be installed, and a lift will give access to basement and all floors. The roof will be asphalted and provided with a fire escape staircase. The steel framework will be supplied by Messrs. Redpath, Brown & Co., Ltd., of 3, Laurence Pounteney-hill, London, E.C. 3. The general contractors are Messrs. Trollope & Colls, Ltd., of 5, Coleman-street, London, E.C. 2. The architects are Messrs. Campbell Jones, Son & Smithers, of 9, Dowgate-hill, Cannon-street, London, E.C. 4.

Pall-mall.—Messrs. Moreland, Hayne & Co., Ltd., inform us that they have been the contractors for the steelwork for this building throughout, and not as stated in our issue of last week.

THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS

Mr. H. W. S. Martin recently read a paper on "Air Washers and Air Filters," at a meeting of the Institution of Heating and Ventilating Engineers, at the Engineers' Club, London, W.C. The lecturer said that in any of their large towns the necessity for washing and filtering the air to cleanse and remove the soot and smoke before passing it into a public building was fully recognised. The smoke, of course, should never be allowed to be put into the air, but they had not yet generally realised the great harm done by this pollution. Very soon, possibly, the health authorities would insist on the smoke nuisance being stopped, or at least very greatly mitigated, but until that time came air washers or filtering apparatus in connection with a plenum heating and ventilating plant for a public building was essential. The most desirable conditions for a public building required humidity for the air. The short, dry cough heard repeatedly in a theatre or church was a clear indication that the air was too dry. Taking the lowest winter temperature obtained in England, and the Home Office humidity regulations for cotton factories, which might be regarded as the maximum desirable, the degree of humidity to be aimed at and regarded as the standard condition for health lay between those two extremes. It was, however, the medical man who should determine what was the best and most healthful standard condition, and then the heating and ventilating engineer should design his apparatus to maintain that condition.

TRADE NEWS

The Casskaid Barrel Skid, manufactured and distributed by Messrs. R. Wickens & Sons, of Capel, Tonbridge, Kent, is, they state, the most useful all-round appliance for handling 40-gallon casks on the market. They claim that it will do the work of four men, and that it is simple, strong and cheap. With the aid of this skid casks can be either conveniently unloaded from vehicles or emptied from the side.

We have received from Messrs. The Elsan Manufacturing Co., 34–5, High Holborn, some interesting particulars regarding their indoor sanitary appliances. They claim—and it is supported by the Institute of Hygiene—that the Elsan Closet makes sanitary methods possible for those unable to depend on any public system of drainage. It is portable, well-designed, and can be easily fixed. They state that those interested in the promotion of hygiene are bound to be interested in this invention. Details are given of a number of installations.

We have received from Messrs. General Motors, Ltd., London, a brochure dealing with their G.M.C. trucks. This firm are, as is well known, the largest makers of high-class cars and trucks in the world, and produce the Buick, Cadillac, Chevrolet, and Oldsmobile cars. They claim that in the G.M.C. trucks they have incorporated at least seven distinct pioneer features which give these trucks an unchallengeable superiority over any other truck at present on the market. The brochure incidentally gives an intending truck purchaser an invaluable standard by which to measure up the qualities of any motor truck. General Motors, Ltd., say frankly that in their opinion the more an intending purchaser knows about motor trucks the more certainly will such a man be attracted by G.M.C. trucks.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons.	Brick-layers.	C'p'ters, Joiners.	Plas-terers.	Slaters.	Plum-bers.	Painters.	Labourers.
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Brentwood	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
E. Glam.(Mon. Vall)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/5	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Grays	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London :—								
within 12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4½
From 12-15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Luton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Windsor	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 918.)

CONTRACTS, COMPETITIONS, &c.

Forsome contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING.

DECEMBER 6.—**Flegg.**—HOUSES.—For erection of non-parlour houses at Martham (two pairs), Hemsby (pair), Winterton (pair), Repps (pair), Ormesby St. Michael (pair), Burgh St. Margaret (pair), Rollesby (pair), for the E. & W. R.D.C. Mr. R. Gournay Ferrier, Clerk, 16, South Quay, Great Yarmouth. Deposit 10s. 6d.

DECEMBER 6.—**Hove.**—HOUSES.—For erecting 22 small houses in Portland-road, and 70 at the Housing Estate in Old Shoreham-road, for the Borough of Hove. Borough Surveyor's Office, Hove. Deposit £1 1s.

DECEMBER 6.—**Stafford.**—ALTERATIONS.—For alterations and additions to the fire station, for the T.C. Mr. H. H. Battle, Town Clerk, Borough Hall. Deposit £1 1s.

DECEMBER 6.—**Stevenage.**—HOUSES.—For erection of 32 houses, for the U.D.C. Mr. Reg. A. Gandy, M.Inst.M. and Cy.E., Engineer and Surveyor, Council Offices, Stevenage. Deposit £2 2s.

DECEMBER 8.—**Ashton-in-Makerfield.**—DISTEMPERING.—For papering and distempering of the rooms of 80 houses, for the U.D.C. Mr. A. Sykes, Clerk to the Council, Council Offices. Deposit £1 1s.

DECEMBER 8.—**Aylsham.**—REPAIRS.—For repairs and alterations to the old outside Infirmary block at the Workhouse, for the B.G. Mr. H. J. Gidney, Clerk.

DECEMBER 8.—**Barnes.**—COTTAGE.—Erection of a keeper's cottage at Sheen Common, East Sheen, for the U.D.C. of Barnes. Mr. G. Bruce Tomes, A.M.Inst. C.E., Surveyor to the Council, The Council House, High-street, Mortlake, S.W.14.

DECEMBER 8.—**Bridgend.**—ALTERATIONS.—For alterations at the Cottage Homes, for the B.G. Mr. R. Harmar Cox, Clerk to the Guardians, Union Offices, Bridgend.

DECEMBER 8.—**Dublin.**—ADDITIONS.—For erection and completion of a new sanitary block and other works at the Christian Brothers' Schools, North Brunswick-street, for the Rev. Brother Curley, Superior. Mr. J. J. Robinson, architect, 8, Merrion-square. Deposit £3 3s.

DECEMBER 8.—**Farnborough.**—COTTAGES.—For erection of six cottages in Queen's-road for the U.D.C. Mr. J. E. Hargreaves, Surveyor, Town Hall. Deposit £1.

DECEMBER 8.—**Haslingden.**—HOME.—For erection of a new nurses' home at their Moorland Infirmary, Rawtenstall, for the B.G. Mr. A. N. Rothwell, Clerk to the Guardians, Union Offices, Rawtenstall. Deposit £2 2s.

DECEMBER 8.—**London, N.1.**—ALTERATIONS AND CONVERSION.—Alterations and conversion into offices and garage of No. 2, Burnard-place, Eden-grove, Holloway-road, Islington, N.1, for the Metropolitan Borough Council of Islington. Mr. E. C. P. Monson, Council's Architect, Finsbury Pavement House, 120, Moorgate, London, E.C.2. Deposit £2.

DECEMBER 8.—**London, N.1.**—VARIOUS WORKS.—Works in connection with the erection of the extension of the Islington Municipal Offices, Tyndale-place, Upper-street, London, N.1, hardwood joinery, electric installation, strong room doors, metal shelving, bronze grilles and caps. Mr. E. C. P. Monson, Council's Architect, Finsbury Pavement House, 120, Moorgate, London, E.C.2, upon payment of a deposit of £1 for each of the above items.

DECEMBER 8.—**Long Ashton.**—HOUSES.—For erection of 10 houses at Claverham, for the R.D.C. Mr. A. E. Hicks, Clerk to the Council, Flax Bourton, Bristol.

DECEMBER 8.—**Naas.**—REPAIRS.—For new works and repairs to cottages in Scheme No. 45, Naas No. 1 Rural District. The Engineer, Sailors and Soldiers Department, Colonial Office (Irish Branch), 30, Lower Fitzwilliam-street, Dublin. Deposit £1 1s.

DECEMBER 8.—**Penistone.**—ALTERATIONS.—For adaptation of certain rooms and buildings as changing room, library and cycle sheds, for the West Riding E.C. Education Department, County Hall, Wakefield.

DECEMBER 8.—**Reigate.**—COTTAGE.—For erection of a foreman's cottage at the Council's depot, Kingswood Cross, Kingswood, for the R.D.C. Mr. F. C. Morrison, Clerk, 46, High-street.

DECEMBER 8.—**Upton Pyne.**—BUILDING.—For erection of a small administrative building, for the Devon C.C. County Architect (Public Health), 1, Blackall-road, Exeter. Deposit £1 1s.

DECEMBER 8.—**Wokingham.**—ALTERATIONS.—For alterations and additions at the rear of the premises, Rose-street, for the Wesleyan Chapel. Mr. F. F. Burland, Trustees' Secretary.

DECEMBER 8.—**Worsborough.**—GARAGE.—For construction of a garage at Furnace-yard, Worsborough Bridge, for the U.D.C. Mr. A. Clegg, Clerk to the Council, 31, Regent-street, Barnsley. Deposit £1 1s.

DECEMBER 9.—**Aberdeen.**—SHED.—For works in connection with the erection of a tramway car shed at King-street, as follows: Mason, iron and steel, carpenter, cement concrete, slater, plumber, heating, and painter works, for the T.C. Mr. J. Gordon, Burgh Surveyor, Burgh Surveyor's Office, Town House.

✱ DECEMBER 9.—**Birmingham.**—HOUSES.—Erection of 117 non-parlour type houses under Contract 167, on Monica-road extension, Haybarn Farm Estate, Birmingham, for the Public Works and Town Planning Committee, of the City of Birmingham. Mr. Herbert H. Humphries, M.Inst.C.E., City Engineer and Surveyor and Executive Officer for Housing Schemes, The Council House, Birmingham. Deposit £1 1s.

DECEMBER 9.—**Glasgow.**—HOUSE.—For erection of a tennis club house at Mosspark, for the Corporation. Mr. J. Lindsay, Town Clerk, City Chambers.

DECEMBER 9.—**Liverpool.**—PAINTING.—For outside cleaning, painting, and repairs, &c., at the City Chambers, 59 and 67, Church-street, for the T.C. Mr. Walter Moon, Town Clerk, Municipal Buildings.

DECEMBER 9.—**Portsmouth.**—SHELTERS.—For provision and erection of tramway shelters on different sites, for the Corporation. Town Clerk, Town Hall. Deposit £2 2s.

DECEMBER 10.—**Basingstoke.**—COWSHEDS, &c.—Erection of additions to farm buildings, consisting of cowsheds, piggeries, &c., at the Park Prewett Mental Hospital, Basingstoke. Mr. A. Turner, Clerk of Works, Park Prewett Mental Hospital, Basingstoke. Deposit £2 2s.

DECEMBER 10.—**Belfast.**—SHED.—For erection of a goods shed on the east side of the Dufferin Dock, for the Harbour Commissioners. Mr. M. J. Watkins, General Manager and Secretary, Harbour Office.

DECEMBER 10.—**Beeston.**—HOUSES.—For erection of 22 houses, for the U.D.C. Clerk. Deposit £2 2s.

DECEMBER 10.—**Boston.**—HOUSES.—For erection of 20 houses, in blocks of two, on the Corporation Woodville-road site, for the C.B. Mr. G. E. Clarke, Borough Surveyor.

DECEMBER 10.—**Bournemouth.**—GREENHOUSE.—For erection of a greenhouse and propagating house adjoining the present greenhouses in King's Park, Boscombe, for the C.B. Mr. F. P. Dolamore, Borough Engineer and Surveyor, Town Hall.

DECEMBER 10.—**Bradford.**—SUB-STATION.—For erection of a sub-station at Four-lane Ends, for the T.C. Mr. N. L. Fleming, Town Clerk, Town Hall, Bradford.

DECEMBER 10.—**Dewsbury.**—RETORT HOUSE.—For demolition of an existing retort house and supply and erection of a steel and brick retort house, for the C.B. Mr. H. Booth, Town Clerk, Town Hall.

DECEMBER 10.—**Hambledon.**—BUILDING.—For erection of a small building at the Institution, for the B.G. Mr. Ferdinand Smallpeice, Clerk, 138, High-street, Guildford.

DECEMBER 10.—**Liverpool.**—HOUSES.—Erection and completion of houses based on the Corporation standard cottages of 950 and 814 super ft. floor area, built in brickwork or other sound materials, giving a satisfactory finish, and suitable for a life of 75 years, for the Housing Committee of the Liverpool Corporation. Tenders, which should be for lots of 50 or upwards, City Engineer's Office, Municipal Buildings, Liverpool.

DECEMBER 10.—**Middlesex.**—HOSPITAL.—Erection of a hospital for 173 beds, nurses' home, and children's probation block, Edgware, Middlesex, for the Guardians of the Hendon Union. Mr. C. W. Wyles, Clerk to the Guardians, Union Offices, Edgware. Deposit £5.

DECEMBER 10.—**Nottingham.**—PAINTING.—For internal cleaning and painting at the following schools: Bath-street Council, New Basford Trust, Sneinton Dale Council, Sneinton Special, Sneinton Trust, and Wollaton-road, for the T.C. Mr. A. H. Whipple, Director of Education, South-parade.

DECEMBER 11.—**Consett.**—VESTRY.—For erection of a new vestry at Consett Parish Church. Mr. J. D. Jarvis, Hon. Sec., 17, Stratford-terrace.

DECEMBER 11.—**Manchester.**—HOUSE.—For construction and erection of a boiler-house and pump-house extension at Bradford-road Works, for the T.C. Mr. P. M. Heath, Town Clerk, Town Hall. Deposit £1 1s.

DECEMBER 11.—**Rowley Regis.**—HOUSES.—For erection of 12 houses and incidental works of house drainage, road kerbing, making-up road to proper level, forming footpaths in Macmillan-road, Black Heath, for the U.D.C. Mr. D. Wright, Clerk to the Council.

DECEMBER 11.—**Southend-on-Sea.**—PUBLIC CONVENIENCE AND SHELTER.—Erection and completion of public conveniences and shelter and works incidental thereto at Shorefields, Western Esplanade, for the Corporation of Southend-on-Sea. Mr. Robert H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

DECEMBER 12.—**Erpingham.**—COTTAGES.—For erection of 10 cottages, for the R.D.C. Mr. H. N. Bridgwater, Clerk to the Council, St. Peter's-road, Sheringham.

DECEMBER 12.—**Farnworth.**—HOUSES.—For erection of 30 houses at Highfield, Farnworth, for the U.D.C. Mr. W. Tyldsley, Clerk to the Council, Town Hall, Farnworth. Deposit £2.

✱ DECEMBER 12.—**Gloucester.**—HOUSES.—Erection of 100 houses upon Corporate land adjoining roads already made within the City boundary, for the Corporation of the City of Birmingham. City Surveyor, Guildhall, Gloucester. Deposit £5 5s.

DECEMBER 12.—**Liverpool.**—POINTING.—For pointing brickwork, &c., at the Balfour Institute, Smithdown-road, for the Corporation. Mr. W. Moon, Town Clerk, Municipal Buildings.

DECEMBER 13.—**Blything.**—ROOMS.—For two bath rooms, in wards at the Union, for the B.G. Mr. J. W. Tallop, Clerk to the Guardians, Clerk's Office, Bulcamp, Halesworth.

DECEMBER 13.—**Newcastle-upon-Tyne.**—PAINTING.—For painting work required at the Relief Offices, 130, Byker-bank, and 71, Park-road, and at the Children's Home, "Louisville," Ponteland, for the B.G. Mr. Gladstone Walker, Clerk to the Guardians, 127, Pilgrim-street, Newcastle-on-Tyne.

DECEMBER 13.—**Plymouth.**—EXTENSION.—For extension to the wholesale meat market, for the C.B. Mr. J. Wibberley, Borough Engineer and Surveyor, Municipal Offices. Deposit £2 2s.

DECEMBER 13.—**Wallingford.**—ALTERATIONS.—For alteration and extension of the pump-house at the Waterworks, for the C.B. Mr. F. R. Hedges, Town Clerk, Wallingford.

✱ DECEMBER 13.—**Westgate-on-Sea.**—PAVILION AND BATHING ACCOMMODATION.—Erection of (1) pavilion, (2) bathing accommodation and public convenience, for the Westgate-on-Sea Council. Mr. F. J. Cornford, Town Hall Buildings, Westgate-on-Sea. Deposit £1 1s.

DECEMBER 15.—**Banbridge.**—ADDITIONS.—For alterations and additions to Banbridge R.U.C. Barracks, for the Government of Northern Ireland. Mr. W. R. Maconkey, Assistant Secretary, Ministry of Finance, Belfast.

DECEMBER 15.—**Barnsley.**—PAINTING.—For painting and decorating Buckley-street P.M. Church. Mr. J. T. Steel, 73, Commercial-street.

DECEMBER 15.—**Bournemouth.**—HOUSES.—For erection of 21 pairs of semi-detached houses on the Southhill estate, Winton, for the C.B. Mr. F. P. Dolamore, Borough Engineer and Surveyor, Town Hall. Deposit £1 1s.

DECEMBER 15.—**Dewsbury.**—ADDITIONS.—For the excavators, bricklayers and masons, carpenters and joiners, plumbers and glaziers, plasterers, slaters, and painters' work required in the erection and completion of proposed pavilion and mortuary at Whitley Grange Hospital, for the C.B. Mr. Holland Booth, Town Clerk, Town Hall. Deposit £1 1s.

DECEMBER 15.—**Guildford.**—EXTENSION TO SLIPPER BATHS AND PUBLIC CONVENIENCE.—Extension to slipper baths and public convenience, for the Borough of Guildford. Mr. W. G. Cross, Assoc.M.Inst.C.E., Borough Engineer, Municipal Offices, Tuns Gate, Guildford. Deposit £2 2s.

DECEMBER 15.—**London, E.C.2.**—REDECORATION.—Redecoration of the Shoreditch Town Hall, Old-street, E.C.2, for the Shoreditch Borough Council. Mr. T. L. Hustler, Borough Surveyor, Town Hall, Old-street, E.C.2. Deposit £2 2s., to the Borough Accountant's Office.

✱ DECEMBER 15.—**Maidstone, Kent.**—COUNCIL SCHOOL.—Erection of a Council School for 340 boys at Rose-street, Sheerness, in the County of Kent, for the Kent Education Committee. County Education Architect (Mr. W. H. Robinson, F.S.Arc.), at Room 69, Sessions House, Maidstone. Deposit £2 2s. in the form of a cheque payable to the Kent Education Committee, and crossed "National Provincial Bank of England, Ltd."

DECEMBER 15.—**Middlesbrough.**—EXTENSION.—For extension of Holgate institution nurses' home, for the B.G. Mr. H. Bilson, Clerk to the Guardians, Poor Law Offices, Municipal Buildings. Deposit £2 2s.

DECEMBER 15.—**Penarth.**—HOUSES.—For building of 30 houses proposed to be erected on sites in Andrew-road, Cogan for the U.D.C. Mr. J. W. Morris, Clerk, Council Offices. Deposit £2 2s.

DECEMBER 15.—**Pontlianfraith.**—SCHOOL.—For erection of a new secondary school, for the Monmouthshire E.C. Mr. C. Dauncey, Secretary, County Hall, Newport, Mon. Deposit £2 2s.

DECEMBER 15.—**Saddleworth.**—POLICE STATION.—For erection of a new police station, for the West Riding C.C. Mr. P. O. Platts, A.R.I.B.A., County Architect, County Hall, Wakefield. Deposit £1.

DECEMBER 16.—**Chadderton.**—HOUSES.—For erection of 8 houses, in two blocks of 4, in Taylor-street, for the U.D.C. Mr. J. Schofield, Clerk of the Council, Town Hall. Deposit £1 1s.

DECEMBER 16.—**Dublin.**—ADDITIONS.—For erection of a new wing to the National Library, Dublin, for the Commissioners of Public Works. Mr. J. J. Healy, Secretary, Office of Public Works, Baile Atha Cliath, Dublin. Deposit £1.

DECEMBER 16.—**Ludlow.**—POST OFFICE AND TELEPHONE EXCHANGE.—Erection of a new Post Office and Telephone Exchange, at Ludlow, for the Commissioners of H.M. Office of Works. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners of H.M. Works, &c.).

DECEMBER 16.—**Scunthorpe.**—HOUSES.—For erection and completion of 30 houses, for the U.D.C. Mr. J. F. Auld, Clerk to the Council, Council Offices. Deposit £2.

DECEMBER 16.—**Slaithwaite.**—BUILDING.—For all or any trades in connection with the building for refuse destructor plant, for the U.D.C. Mr. Edgar Freeman, Clerk to the Council, Town Hall.

DECEMBER 16.—**Wakefield.**—ALTERATIONS.—For alterations required at Queensbury Upper Council School, for the West Riding C.C. The Education Department, County Hall, Wakefield.

DECEMBER 17.—**Greasbrough.**—HALL.—For erection of a public hall, &c., for the U.D.C. Mr. John H. Jackson, Clerk to the Council, Council Offices. Deposit £2.

DECEMBER 17.—**Risca.**—HOUSES.—For erection of 150 houses on the Ty-isaf site, for the U.D.C. Mr. A. J. Dardis, Surveyor and Engineer, Council Offices, Risca (Mon). Deposit £2 2s.

✱ DECEMBER 18.—**Chelsea.**—PAINTING AND REPAIRS.—Internal plastering, painting and repairs to one of the wards and annexes thereto, at the Hospital, Cale-street, Chelsea, for the Guardians of the Poor of Chelsea. Guardians' Architect, Mr. Edmund J. Harrison, Lic.R.I.B.A., 23, Berkeley-road, Crouch End, N.8. Deposit £2.

DECEMBER 18.—**Marsden.**—ADDITIONS.—For additions and alterations to the sewage works, for the U.D.C. Mr. H. Greenwood, Clerk to the Council, Council Offices, Marsden, near Huddersfield. Deposit £1 1s.

DECEMBER 19.—**Ireland.**—PAINTING.—For internal and external painting works at the Curragh Camp, co. Kildare, for the Commissioners of Public Works. Mr. J. J. Healy, Secretary, Office of Public Works, Baile Atha Cliath, Dublin. Deposit £1.

DECEMBER 20.—**Boston.**—HOUSES.—For 20 houses in blocks of two on the Corporation Woodville-road site, for the T.C. Mr. G. E. Clarke, Borough Surveyor.

DECEMBER 20.—**Rathdrum.**—REPAIRS.—For repairs to cottages provided under the R.D. Scheme No. 49, in accordance with plan and specification prepared by the Engineer, Sailors' and Soldiers' Department, Colonial Office (Irish Branch), 30, Lower Fitzwilliam-street, Dublin. Mr. R. E. Beckerson, Chief Clerk. Deposit £1 1s.

DECEMBER 20.—**Rye.**—EXTENSIONS.—For enlarging engine house, for the T.C. Mr. W. Dawes, Town Clerk, Bank Chambers.

★DECEMBER 22.—**Brighton.**—HOUSES.—Erection of 11 houses in Hereford-street, Brighton, for the County Borough Council of Brighton. Borough Surveyor, Town Hall, Brighton. Deposit £1.

DECEMBER 23.—**Southampton.**—COTTAGES.—For erection of two pairs of cottages on a site at the corner of Dickens-lane and the main road 2 miles from Basingstoke, for the C.B. Mr. A. L. Roberts, County Architect, The Castle, Winchester. Deposit £1 1s.

DECEMBER 29.—**Worthing.**—SHELTER.—For erection of a glazed shelter in the Denton-gardens, for the C.B. Mr. J. Kennedy Allerton, Town Clerk, Municipal Offices. Deposit £1 1s.

★DECEMBER 30.—**Burslem, Staffs.**—TELEPHONE EXCHANGE.—Erection of a telephone exchange at Burslem, Staffs, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners of H.M. Works, &c.)

JANUARY 5, 1925.—**Bolton-upon-Dearne.**—HOUSES. For erection of 74 houses, together with road and surface water drainage works in Barnborough-lane, Goldthorpe, for the U.D.C. Mr. J. Ledger Hawksworth, Clerk of the Council, Council Offices, Bolton-upon-Dearne. Deposit £1 1s.

JANUARY 5, 1925.—**Goldthorpe.**—HOUSES, &C.—For the erection of 74 dwelling houses, together with road and surface water drainage works, in Barnborough-lane, or in sections (1) 30 houses, (2) 44 houses, (3) roads and surface water drainage works, for the Bolton-upon-Dearne U.D.C. Mr. William H. Adams, M.S.A., Council Offices, Bolton-upon-Dearne. Deposit £1 1s.

NO DATE.—**Hoyland Nether.**—HOUSES.—For erection of 80 houses at Cobcar-lane, Elsecar, for the U.D.C. Mr. W. E. Raley, Clerk to the Council, Barnsley. Deposit £3 3s.

FURNITURE, MATERIALS, etc.

DECEMBER 8.—**Rawtenstall.**—GRANITE.—For supply of about 2,000 tons of 4 in. × 5 in. granite setts, for the Corporation. Mr. J. Whalley, Town Clerk.

DECEMBER 9.—**Kettering.**—KERBING.—For supply of 620 lin. yds. combined kerb and channelling, 820 sq. yds. paving slabs, 2,500 yds. stoneware pipes, varying from 6 in. to 24 in. in diameter, for the U.D.C. Mr. J. Bond, Clerk to the Council, Council Offices, Kettering.

DECEMBER 13.—**Kent.**—GRANITE.—For supply of various granite, for the C.C. Mr. H. T. Chapman, County Surveyor, St. Peter-street, Maidstone.

DECEMBER 15.—**Rotherham.**—SEWERAGE.—For materials required in the construction of (1) sewage disposal works (tanks and filters); (2) approximately 2,500 yds. of 12 in. and 9 in. pipe sewers; (3) inserting 12 in. sewer under canal, for the R.D.C. Mr. C. O. Rawstron, Engineer and Surveyor, Engineer's Office, Grove-road, Moorgate. Deposit £3 3s.

DECEMBER 16.—**Tottenham.**—BLOCKS.—For supply of creosoted deal blocks, for the D.C. Mr. R. C. Graves, Clerk and Solicitor of the Council, Solicitor's Department, Town Hall.

DECEMBER 18.—**Hull.**—STORES.—For supply of builders' materials, &c., for the Corporation. Mr. H. Bell, City Electrical Engineers, Sculcoates.

★DECEMBER 18.—**London, E. 1.**—SUPPLY OF GOODS AND VARIOUS WORKS.—Tenders for contracts for twelve months from April 1, 1925, except last two contracts, which are for the period from April 1, 1925, to September 30, 1925, for the Metropolitan Borough of Stepney. Items 1 to 23, Mr. Bernard J. Belsher, Borough Engineer and Surveyor, Municipal Offices, Raine-street, Old Gravel-lane, E. 1; deposit, £1 Treasury Note in respect of each tender. Items 24 to 32, Mr. V. B. Bateson, Town Clerk, Municipal Offices, Raine-street, Old Gravel-lane, E. 1; deposit, £1 Treasury Note in respect of each tender.

ENGINEERING, IRON AND STEEL.

DECEMBER 6.—**Dewsbury.**—TANKS.—For construction of percolating filters, humus tanks, and other appurtenant works in connection with the construction of sewage disposal works at Mitchell Laithes, for the T.C. Mr. Holland Booth, Town Clerk, Town Hall. Deposit £2 2s.

DECEMBER 8.—**Castle Ward.**—RECONSTRUCTION.—For reconstruction of Milbourne Bridge, for the R.D.C. Mr. G. E. Wilkinson, Clerk to the Council, 1, Mosley-street, Newcastle-upon-Tyne.

DECEMBER 8.—**Herne Bay.**—LANDING STAGE.—For extension of landing stage at the pier head in ferro-concrete, for the U.D.C. Mr. Geo. H. Beetenson, Clerk to the Council, Clerk's Office, Town Hall, Herne Bay. Deposit £2 2s.

DECEMBER 10.—**Liverpool.**—SEATING.—For construction of seating for three boilers, for the T.C. Mr. W. Moon, Town Clerk. Deposit 10s. 6d.

DECEMBER 11.—**Manchester.**—TOWER.—For supply, delivery, and erection of a cooling tower at Bradford-road Gasworks, for the T.C. Mr. P. M. Heath, Town Clerk, Town Hall.

DECEMBER 13.—**Near Penrith.**—BRIDGE.—For construction in ferro-concrete of a new bridge across the Dacre Beck in Dalemain Park, on the Penrith to Ullswater-road, about 3 miles from Penrith Station, for the Cumberland C.C. Mr. G. O. Lockwood, County Surveyor and Bridgemaster, The Courts, Carlisle. Deposit £2.

DECEMBER 15.—**Belfast.**—STEEL FRAMEWORK.—For steel framework for internal office building, for the Corporation. Mr. R. Meyer, Town Clerk. Deposit £2 2s.

DECEMBER 15.—**Rotherham.**—RESERVOIR.—For construction of a ferro-concrete reservoir, for the C.B. Mr. C. L. Des Forges, Town Clerk, Town Hall. Deposit £2 2s.

DECEMBER 15.—**Shrewsbury.**—MASONRY.—For erection of masonry bridges for the reconstruction of the English Bridge, for the T.C. Mr. R. F. Prideaux, Town Clerk, Guildhall. Deposit £10.

DECEMBER 20.—**Egypt.**—RESERVOIR.—For construction of a steel reservoir, for the Ministry of the Interior. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

DECEMBER 20.—**Southampton.**—STORES.—For erection of a steel framed electrical stores building on a piled foundation to the Western Esplanade, for the C.B. Mr. R. R. Linthorne, Town Clerk. Deposit £3 3s.

DECEMBER 20.—**Wilmslow.**—ADDITIONS.—For construction of screen chamber, suction wells, settling tanks, percolating filters and humus tanks, sundry lengths of pipeline and sundry auxiliary works, at the Southern Sewage Farm, for the U.D.C. Mr. H. Cliffe, Clerk to the Council, Clerk's Office. Deposit £5.

DECEMBER 22.—**Manchester.**—SHEDS.—For construction and completion of two five-story transit sheds, extension of the grain subway, and all ancillary works, at Manchester Docks, for the Ship Canal Co. Mr. F. A. Eyre, Secretary, 41, Spring-gardens. Deposit £10.

DECEMBER 31.—**Hamilton.**—BRIDGE.—**Erection of Clyde Bridge, Hamilton, for the Joint Committee of the County Council of the County of Lanark, Town Council of the Burgh of Hamilton, and Town Council of the Burgh of Motherwell and Wishaw. Messrs. Formans & M'Call, C.E., 160, Hope-street, Glasgow. Deposit £1 1s.**

ROAD, SANITARY, AND WATER WORKS.

DECEMBER 6.—**Aberfeldy.**—POND.—For construction of three-rink artificial curling pond, for the Breadalbane Curling Club. Mr. W. Lindesay Wood, Hon. Secretary.

DECEMBER 8.—**Crewe.**—ROADS.—For making-up part of Gainsborough-road, for the T.C. Mr. H. S. K. Feltham, Town Clerk, Municipal Buildings. Deposit £2 2s.

DECEMBER 8.—**Epsom.**—MAINS.—For providing, laying, excavating and jointing of about 2,820 yards of 4 in. cast-iron water main, including valves, fire hydrants, &c., for the U.D.C. Mr. E. G. Wilson, Clerk, 37, Church-street,

DECEMBER 8.—**Frinton-on-Sea.**—ROADS.—For works of private street improvement in St. Mary's-road, Eton-road, and Oxford-road, Frinton-on-Sea, for the U.D.C. Mr. P. O. Macdonald, Clerk to the Council, The Council House.

DECEMBER 8.—**Hendon.**—SEWER.—For about 1,900 yds. 9 in. by 12 in. stoneware pipe sewer, including manholes and other works, for the U.D.C. Mr. H. Humphris, Clerk to the Council, Town Hall, Hendon, N.W.4. Deposit £3 3s.

DECEMBER 8.—**Howth (Ireland).**—ROAD.—For construction of a ferro-concrete roadway, for the U.D.C. Town Clerk, Howth.

DECEMBER 8.—**Romford.**—SEWER.—For carrying out the laying of about 400 yds. of 9 in. stoneware pipe sewer and other works appertaining thereto in the main road, Hare-street, for the U.D.C. Mr. F. G. Beaumont, Engineer and Surveyor. Deposit £1 1s.

DECEMBER 8.—**Southampton.**—IMPROVEMENT.—For executing certain road improvement works in Church-lane, for the C.B. Mr. R. R. Linthorne, Town Clerk. Deposit £1 1s.

DECEMBER 9.—**Southgate.**—ROADS.—For making-up of (*a*) Doveridge-gardens, (*b*) Lynbridge-gardens, (*c*) Chimes-avenue, (*d*) Lawrence-avenue, (*e*) Hamilton-crescent, (*f*) Callard-avenue, for the U.D.C. Mr. A. E. Lauder, Clerk of the Council, Town Hall, Palmer's Green, N. 13.

DECEMBER 9.—**Todmorden.**—PAVING.—For levelling, paving and making good Ramsden Wood-road (part of) and back streets at Rawson Fields Estate, for the C.B. Mr. H. Crabtree, Borough Engineer and Surveyor, Municipal Offices.

DECEMBER 10.—**Cardiff.**—POND.—For construction of a settling pond with contingent works at Ely Paper Works, for Messrs. Thomas Owen & Co. Mr. J. W. Rodger, Architect, Newton, Porthcawl, Glam.

DECEMBER 10.—**Heston and Isleworth.**—MAKING-UP.—For making-up part of Ridgeway-road, part of Church-road, part of Osterley-road, part of Sunnycroft-road, part of Elmsworth-avenue, for the U.D.C. Mr. H. J. Baker, Clerk of the Council, Council House, Hounslow. Deposit £2 2s.

DECEMBER 10.—**Leeds.**—PAVING.—For paving and flagging Victoria-square, Armley, and Dewsbury-street, for the T.C. Highways and Permanent Way Department, 1, Swingate. Deposit £1 1s.

DECEMBER 11.—**Barnet.**—SEWER.—For construction of approximately 2,345 lineal yds. of 3 in. and 12 in. diameter stoneware and cast-iron pipe sewer, manholes, and other incidental works in Totteridge-lane, Totteridge, for the U.D.C. Mr. H. W. Poole, Clerk of the Council, Clerk's Offices, 93, High-street, Barnet, Herts. Deposit £3 3s.

DECEMBER 11.—**Bournemouth.**—SEWER.—For laying and fixing cast-iron pipes, cradles, &c., for the C.B. Mr. F. P. Dolamore, Borough Engineer and Surveyor, Town Hall. Deposit £1 1s.

DECEMBER 11.—**Cannock.**—PIPES.—For construction of about 2½ miles of 12 in. and 9 in. stoneware pipe sewers and appurtenances and sewage disposal works, for the R.D.C. Mr. A. W. Carver, Clerk to the Council, 202, Wolverhampton-road. Deposit £5 5s.

DECEMBER 11.—**Kensington, W.8.**—SANITARY WORK.—(1) Sanitary accommodation at the Guardians' Board Room in the Marloes-road, Kensington; (2) sanitary accommodation at the Marloes-road Institution, Kensington, for the Guardians of the Parish of Kensington. Mr. W. R. Stephens, Clerk to the Guardians, Guardians' Offices, Marloes-road, Kensington, W.8.

DECEMBER 13.—**Chester.**—ROADS.—For roads and sewerage works, for the City and County. Mr. J. H. Dickson, Town Clerk, Town Hall. Deposit £1 1s.

DECEMBER 15.—**Baildon.**—SEWER.—For work in connection with the proposed construction of the 12 in. pipe sewer of an approximate length of 240 lin. yds., together with the necessary manholes, &c., for the U.D.C. Mr. R. Howard Moore, Clerk of the Council, Baildon. Deposit £1 1s.

DECEMBER 15.—**Chepstow.**—WIDENING.—For widening St. Lawrence-road from Newport-road to Tintern road, Chepstow, for the U.D.C. Mr. Fothergill Evans, Clerk to the Council, Chepstow. Deposit £2 2s.

DECEMBER 15.—**Hayfield.**—PIPES.—For providing and laying about 7½ miles of 6 in., 5 in., 4 in., and 3 in. cast-iron pipes, with all necessary valves, hydrants and apparatus, and also for constructing two mass concrete tanks at Hayfield and Mellor, for the R.D.C. Mr. J. R. Bowden, Clerk to the Council, Council Offices, High-street, New Mills, via Stockport. Deposit £5 5s.

DECEMBER 15.—**Sleights.**—MAINS.—For providing, carting and laying of 1,760 lin. yds. of 8 in. cast-iron water mains and valves, for the Whitby Waterworks Co. Mr. J. Taylor, Secretary and Manager, Whitby Waterworks Co., 55, Baxtergate, Whitby. Deposit £2 2s.

DECEMBER 16.—**Birkenhead.**—SEWER.—For construction of a supplementary sewer in Borough-road, comprising about 700 lin. yds. of reinforced concrete sewer formed with 24 in., 27 in., and 30 in. diameter pipes, together with all manholes, gullies, &c., for the C.B. Mr. E. W. Tame, Town Clerk, Town Hall, Birkenhead. Deposit £3 3s.

DECEMBER 16.—**Devon.**—ROAD.—For work required in the reconstruction of approximately 4½ miles of the Exeter-Plymouth-road, for the C.C. Mr. Brian S. Miller, Clerk of the Council, The Castle, Exeter. Deposit £10 10s.

DECEMBER 17.—**Birmingham.**—ROADS.—For reconstruction of Billesley-lane, between Oxford-road and Wake Green-road; reconstruction of Rotton Park-road, between City-road and Dudley-road; and widening of Island-road, Handsworth. Mr. H. H. Humphries, City Engineer and Surveyor, The Council House. Deposit £2 each.

DECEMBER 17.—**Pass of Melfort.**—ROAD.—For construction of a new roadway, about 1¼ miles in length, at the Pass of Melfort, for the Argyll C.C. Mr. W. Macdonald, District Road Surveyor, Columba Buildings, Oban. Deposit £2.

DECEMBER 17.—**South Mimms.**—SEWER.—For about 350 yds. of 9 in. stoneware pipe sewer, with manholes, &c., in Mutton-lane, Potters Bar, for the R.D.C. Mr. H. W. Poole, Clerk to the Council, 93, High-street, Barnet.

DECEMBER 19.—**Wood Green.**—CULVERTS.—For construction of about 724 yds. of reinforced concrete culvert and about 437 yds. of 42 in., 27 yds. of 36 in., and 70 yds. of 30 in. diameter granite concrete tube culvert, with the necessary inspection shafts and tumbling bays constructed to special details in reinforced concrete, for the U.D.C. Mr. C. Eric Staddon, Clerk of the Council, Town Hall, Wood Green, N. 22. Deposit £1 1s.

DECEMBER 31.—**Cowbridge.**—MAINS.—For a covered service reservoir in mass concrete, and 18,900 lin. yds. of various cast-iron mains, for the Mid-Glamorgan Water Board. Messrs. Thomas & Morgan & Partners, Civil Engineers, Pontypridd. Deposit £10 10s.

Competitions.

(*See Competition News, page* 888.)

Auction Sales, Tenders, etc.

DECEMBER 9.—**East Kent.**—Messrs. Hampton & Sons will sell, at the St. James' Estate Rooms, 20, St. James'-square, S.W.1, freehold residential and building property of over 14½ acres, to be offered in one or six lots. Auctioneers, 20, St. James'-square, S.W.1.

DECEMBER 9.—**Farnborough, Kent.**—Mr. C. E. Clark will sell, without reserve, opposite "New Inn," Farnborough, Kent, sale of prime new timbers. Auctioneers, Beddington House, Beddington, near Croydon.

★DECEMBER 9.—**Stockwell.**—Messrs. Veryard & Yates, F.A.I., will sell, without reserve, at 255, Clapham-road, stock of capital timber and building materials. Auctioneers, 365, Norwood-road, S.E.27.

DECEMBER 9 AND 10.—**London, E.C.4.**—Messrs. Fuller, Horsey Sons, & Cassell will sell, by order of the Ministry of Transport, road contractors' plant, at 11 o'clock each day, at the Merchants' Hall, Baltic Exchange, St. Mary Axe. Auctioneers, 11, Billiter-square, E.C.3.

★DECEMBER 10.—**Croydon.**—Messrs. Veryard & Yates, F.A.I., will sell, by order of Frame Buildings Co., at Shirley-road, portable buildings, frames, &c.; also freehold land, Shirley-road, Croydon, and Stuart-road, Warlingham. Auctioneers, 365, Norwood-road, S.E.27.

✱DECEMBER 11.—**Brixton Hill.**—Messrs. Veryard & Yates, F.A.I., will sell, without reserve, timber and building materials, at 1.30 p.m. Auctioneers, 365, Norwood-road, S.E.27.

DECEMBER 11 AND 12.—**Berwickshire.**—Messrs. Perry & Phillips will sell (unless previously sold by private treaty), on the premises, Blackadder House, Berwickshire (in 600 lots), the whole of the interior and exterior fixtures and fittings previous to the demolition of the mansion, pine flooring, doors, oak flooring, marble, oak, granite mantelpieces, stone staircase, garden ornaments, iron gates, central heating boilers, the fabric of the mansion, balustrading, lead, &c. Auctioneers, Bridgnorth.

✱DECEMBER 12.— **Weymouth.** — Messrs. Fuller, Horsey, Sons & Cassell will sell nearly-new building material at the Whitehead Torpedo Factory, at 11 o'clock. Auctioneers, 11, Billiter-square, E.C.3.

✱DECEMBER 16.—**London, S.E.12.**—Mr. C. E. Clark will sell, without reserve, at Cooper's-lane, Grove Park, S.E.12, prime new timber. Auctioneers, Beddington House, Beddington, near Croydon.

✱DECEMBER 16.—**London, W.**—Mr. Richard J. Steel will sell, at Walmer Gardens, Midhurst-road, Ealing, W., the whole of the woodworking machinery and plant of a large variety. Auctioneer, 2, Plough-terrace, South Ealing, W.5.

✱JANUARY 14,—**London, E.**—Messrs. J. T. Skelding & Co., without reserve, owing to expiration of lease, at the Building Material Depot, Tredegar-square, Mile End-road, E., timber and building materials, including 200 tons of old oak beams and scantlings, R.S. joists, steam pipe and fittings, slates, scaffolding, trailer, vans, timber and corrugated iron sheets, &c. Auctioneers, 48, Gresham-street, Guildhall, E.C.2.

Public Appointments.

DECEMBER 8.—**Cape Town.**—Lecturer in building trades subjects wanted for the Cape Technical College, Cape Town. Messrs. Chalmers, Guthrie & Co., Ltd., 9, Idol-lane, London, E.C.3.

✱DECEMBER 9.—**Manchester.**—Clerk of Works required by the Barton-upon-Irwell R.D.C., in connection with the Council's Housing schemes. Mr. Chas. Faulkner, Clerk to the Council, Council Offices, Green-lane, Patricroft, Manchester.

✱DECEMBER 10.—**Battersea, S.W.11.**—Works Foreman required to act under the general direction and control of the Borough Engineer and Surveyor, by the Battersea Borough Council. Mr. Edwin Austin, Town Clerk, Town Hall, Battersea, S.W.11.

✱DECEMBER 13.—**London, N.9.**—Temporary General Foreman required by the Edmonton Urban District Council for the erection of 82 houses, the estimated cost of which is £50,000. Mr. Cuthbert Brown, M.B.E., M.Inst.C.E., Engineer and Surveyor, Town Hall, Edmonton, London, N.9.

DECEMBER 15.—**Durham.**—Two Assistant Architects and one Assistant Quantity Surveyor required by the county of Durham Education Committee. Director of Education, Shire Hall, Durham, enclosing stamped addressed foolscap envelope.

✱DECEMBER 15.—**London, W.1.**—Full-time Lecturer required (qualified Surveyor) at the Polytechnic, Regent-street, W.1, School of Architecture, Building and Surveying. Director of Education.

JANUARY 1.—**Cambridge.**—Assistant to the Master required by the Board of Architectural Studies at the University of Cambridge, School of Architecture. The Secretary of the Board of Architectural Studies, Mr. Edward Bullough, Gonville and Caius College, Cambridge.

✱NO DATE.—**Gold Coast.**—Building Foreman required by the Government of the Gold Coast, for the Public Works Department, for two tours of 12 to 18 months' service. Crown Agents for the Colonies, 4, Millbank, Westminster, London, S.W.1, quoting M/13228.

✱NO. DATE.—**Gold Coast.**—Foreman of Works required by the Government of the Gold Coast Public Works Department, for two tours of 12 to 18 months' service. Crown Agents for the Colonies, 4, Millbank, Westminster, London, S.W.1, quoting at head of letter M/13148.

Westminster Women's Housing Council.

At a meeting of the Westminster Women's Housing Council, held at 18, Carlton House-terrace, on Tuesday last week, Miss Picton-Turbervill, President, spoke of the powers which the City Council had under existing legislation to do away with many of the difficulties in regard to bad housing, without a great increase in public expenditure. Sir Arthur Griffiths Boscawen outlined a public utility scheme which the Church Army was in process of forming, for the purpose of housing the ex-soldier and the low wage earner with a family in such a house as he could afford. They had already sufficient funds to start about twelve cottages in Willesden and for the consideration of other building sites, but they were appealing for £300 to enable them to carry on the work, and they were hoping to build the next lot in Westminster, where the W.W.H.C. had promised their co-operation in the management of the cottages when built.

PROPOSED NEW BUILDINGS & OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; and B.E. for Board of Education.

ABERYSTWYTH.—Plans passed by the B.C.: Two houses on site of old skating rink, for Messrs. John Jenkins & Sons; new offices at the old Brewery, Trefechan, for C. Roberts & Sons; house at Infirmary-road, for Messrs. J. G. Thomas & Son.

ANFIELD PLAIN.—Plans passed by the U.D.C.: Ten houses, Delight-rows, Dipton, Messrs. John Bowes & Partners; four houses, West Kyo, Messrs. Thompson & Brown; and two houses, West Kyo, Messrs. Lee & Dunn.

BEDFORD.—The T.C. approved plans: Usher & Anthony, for C. Wells, Ltd., boiler house, "Gordon Arms," Castle-road; Mr. E. H. C. Inskip, for Mr. G. Valentine, house, London-road; Mr. E. H. C. Inskip, for Mr. T. W. Matkin, house, Bradgate-road; Mr. G. P. Allen, for Governors of Harpur Trust, lavatory block, Boys' Modern School; Mr. E. H. C. Inskip, for Mr. W. P. Mayo, house, Bromham-road.

BEDWELLTY.—The U.D.C. has decided that in addition to the 100 new houses decided upon for the Cefn Forest Ward, the Housing Committee shall consider the question of erecting houses in all sections of the urban area.

BEXHILL.—The County Council has passed the plans for a secondary school at Bexhill, which is to cost £52,000.

BINGLEY.—Plans passed: House, Bailey Hills, Mr. Jowett.

BIRMINGHAM.—The E.C. has considered preliminary plans for the erection of a proposed new school at Hall Green; also plans for a proposed new secondary school at Belchers-lane, Saltley. A site has also been acquired at Witton Lodge, Erdington, upon which it is proposed to erect a new school with accommodation for 1,200 children, estimated cost of erection £40,000. The Health Committee of the Corporation has approved of plans for the erection of a new health clinic at Sheep-street, at an estimated cost of £7,100.

BLAYDON.—The M.H. has given sanction to the U.D.C. for the erection of 30 houses at Bleach Green. Permission is to be sought to build an additional 32.—A contract has been signed for the erection of 46 houses at Highfield, near Rowlands Gill.

BOLTON.—The T.C. is to borrow £28,000 for the proposed purchase of 10 houses in Bowgreave-avenue, now in course of erection by Messrs. William Gornall & Sons, Ltd., and 43 proposed to be erected in Singleton-avenue by Messrs. Gornall. A loan of £47,000 is to be sought for the purchase of land and 90 houses proposed to be erected thereon by Messrs. Leigh Bros., Ltd. The Housing Committee has agreed to grant subsidies for 28 houses to be erected in Forton-avenue by Messrs. Gornall. Tenders are to be obtained for the Harpers-lane improvement, estimated to cost £4,500. Plans passed: Boiler-house, Spa-road, Messrs. Jackson & Son, Ltd.; pavilion, Boundary-street, Messrs. Harwood & Sons, Ltd.; two houses, Bromwich-street, Mr. J. E. Paiton; six houses, Rydal-road, Messrs. Temperley & Son; addition to church, Loxham-street, for Primitive Methodist Trustees. Lord Leverhulme has sent plans prepared on his instructions by Messrs. Bradshaw, Gass & Hope, architects, showing arrangements surrounding the town hall and stating that it is his intention to proceed with the Causeway, which is an essential feature of the proposed scheme, and to provide £100,000 towards.—The Corporation are to build a new day school in Devonshire-road, at a cost of £14,800.

BRADFORD.—Estates are to be developed by Messrs. Croft & Keighley, at Idle-road, and the Pendragon Estate Co., at Bolton-road, Idle-road, and Pendragon-lane. Plans passed: Eight houses, Intake-road, Messrs. Cannfield & Sons; eight houses, Parkside-road, Co-operative Society; two houses, Speeton-avenue, Mr. E. Hallam; two houses, Bolton-road, Messrs. Sugden & Hartley; two houses, Norman-lane, Messrs. Hutchinson & Scott; two houses, Slack Side, Mr. H. Crowther; house, Shotcliffe-lane, Mr. Siddle; house, Westfield-lane, Mr. H. Lee; house, Westfield-lane, Mr. W. Cowbourne. The architect has been asked to proceed where necessary to inspect and report upon steel houses. The M.H. has sanctioned the White Abbey clearance scheme. Additional accommodation is to be provided at the Forster Central School at a cost of £870.——The Electricity Committee of the City Council propose to carry out a scheme for extensions in the Dudley Hill district, comprising new mains, switch-gear, erection of a new switch house and transformer chamber. Tenders for the building works are shortly to be invited. The Corporation are considering an increase of the capacity of the Scar House Reservoir, which is at present under construction. The scheme is estimated to cost £90,000. The M.H. has sanctioned a loan of £16,464 for erection of new warehouse at the Conditioning House in Canal-road, for which work a contract has recently been let.

BRIGHOUSE.—The T.C. approved plans: H. Castle, pair of semi-detached bungalows, Bracken-road West; H. Brooke, villa, Garden-road, Brighouse.

CALVERLEY.—Plans passed: Shop in Gain-lane, for Mr. Cansfield; five houses, for Mr. C. B. Smith, and four houses in Gain-lane.

CARRICK.—The Ayr E.C. has agreed that a new school and teachers' residence should be built in the parish of Dailly. The plans have been approved and forwarded to the Education Department for sanction.

CASTLEFORD.—Plans for the erection of shops and a new billiard hall at Sykes-street, Castleford, for the Kiosk Café Co., have been prepared by Mr. W. C. Bickerton, architect, of Bank-street. Tenders for the work are about to be invited.

CHARD.—The T.C. has received sanction from the M.H. for the erection of four houses at Old Town.

CHESTERFIELD.—The T.C. passed plans: Warehouse, near Cattle Market, for Mr. F. Churchman; house, Storr's-road, for Mr. F. Beaumont; outbuildings, "Decoy House," Tapton-park, for Mr. A. Carrington; house, Paxton-road, Tapton-park, for C. P. Markham; house, Hasland Green, for Mr. Turner; house, Brook-side Bar, for Mr. F. Wilkins; four houses, Springfield-avenue, for Mrs. F. Heath.

CHESTER-LE-STREET.—The R.D.C. has received permission from the M.H. to borrow a total of £20,044 for housing purposes at Edmondsley and Lamesley.

CROYDON.—Plans passed by C.B.: F. H. Willcocks, house, Norbury-avenue; G. & A. Parris, house, Haling Park-road; F. W. Cattermole, four houses, Stanford-road; Crowley Bros., 58 houses, Dovercourt-road; Chesterton & Sons, six houses, Norbury-avenue, next Brooklyn; C. G. Allen, 31 garages and two workshops, London-road; G. & A. Parris, five houses, Haling Park-road; C. E. Head, house, Woodbury Close; Edmonds & Beale, 60 houses, South Norwood Hill, Howden and Auckland-roads, and Woodvale-avenue; A. Farley & Co., warehouse, Sanderstead-road; G. H. Dales, 12 houses, Waddon Park-avenue; F. Roe & Sons, 10 houses, Waddon Park-avenue; A. E. Bates, 22 houses, Tenterden-road; C. Banks, house, Addiscombe-road; R. B. Manser, two houses, Haling Park-road; C. S. Fairman, two houses, Ham Farm; S. Jefferies, six houses, Ingram-road; E. Law, house, Monks' Orchard; E. Law, house, Waddon Park estate; Scratchley Bros., seven houses, Hunter-road; J. Midmer, two houses, Elgar-avenue.—The Borough Engineer has been authorised to prepare and submit plans for the erection of 84 non-parlour and 18 parlour type houses on the Waddon estate.

CUDWORTH.—The U.D.C. has decided to erect a new public convenience in Barnsley-road, at an estimated cost of £150.

DARLINGTON.—The E.C. received intimation that the plans for the new school at Cockerton had been approved by the B.E. The site of the school is on the new housing estate, and covers an area of eight acres. The cost of the building is estimated at £9,600.

DERBY.—The T.C. propose to erect 239 houses (of which 50 are for sale) in various parts of the borough.

DEWSBURY.—Plans passed: Six dwelling-houses, South-street, J. Crossley, jun. The T.C. has decided to make application for sanction to borrow £11,000 for housing subsidies, £14,000 for sewerage disposal works, and £7,000 for erection of a new pavilion at Whitley Hospital.

DONCASTER.—The R.D.C. has approved of plans for the erection of 50 houses at Awkley in connection with the colliery company's developments.

DUMBARTON.—The Dean of Guild Court approved plans presented on behalf of the T.C. for the erection at West Bridgend district of four tenements.

DUNDEE.—Plans and sections of proposed new buildings, &c., have been lodged at the office of the City Engineer: Harefield-road, house, for Mrs. J. C. Bell, Mr. Alex. Lickley (architect); High-street, Lochee, shop, for Messrs. Stewart & Son, Mr. F. W. Simpson (architect); Montague-street, Barnhill, cottage for the Misses Hynd, Messrs. Gauldie & Hardie (architects); Muirfield-crescent, semi-detached cottage, for Adam Gordon, Messrs. Maclaren, Soutar & Salmond (architects); Stirling-road, house, for Maclaren, Soutar & Salmond.

DURHAM.—The City Council has decided to erect 200 houses on the Whinney Hill site to house the persons dispossessed by the demolition of the New Elvet insanitary area.—Plans have been approved by the City magistrates for the provision of a picture hall, ball-room, and billiard saloon at the Old Miners' Hall, Durham, and adjoining premises. The picture hall is to accommodate 862 persons, the ballroom 75 couples, with seating accommodation for 300, and will also be used for concerts, &c., whilst the billiard room will contain twelve tables.

EDINBURGH.—The Dean of Guild Court passed plans: Animal Diseases Research Association, research station at Greenend, Liberton; Board of Agriculture for Scotland, transformer house at East Craigs, Corstorphine; R. E. Price, bungalow at Barnton-park, Davidson's Mains; W. B. Duncan, house, South Inverleith-avenue; Scottish Dyers and Printers, Ltd., dyehouse at Inglis Green-road, Slateford.

EGHAM.—The U.D.C. passed plans for 10 houses.

EPSOM.—The R.D.C. has adopted a town-planning scheme for Cobham, and they have recently had before them a plan from Messrs. J. F. Palser & Son, architects, of London, for the erection of 34 houses in Sandy-lane, leading to Oxshott Woods, from the Fairmile, Cobham.

FLEET.—The U.D.C. propose carrying out additional drainage and sewerage disposal works. Application for sanction to a loan of £20,000 has been applied for. Major T. J. Moss-Flower is consulting engineer for the work.

FOLKESTONE.—The T.C. are to invite tenders for a band pavilion in the Marine Gardens.

GILDERSOME.—Plans have been prepared by the Council Surveyor, Mr. Wilby, for the erection of 10 houses (non-parlour type) on the Vicarage site No. 2. Tenders are now being invited for the erection of these

* See also our List of Contracts, Competitions, etc.

houses and the construction of the necessary road works and sewers.

GLAMORGAN.—The Barry U.D.C. has in consideration the extension of the Barry Surgical and Accident Hospital. The Caerphilly U.D.C. has passed plans for the erection of a new mixed school at Nantgarw and a new boys' school and a handicraft centre at Hendre, all to be erected by the Glamorgan County E.C. (Architect Mr. D. Pugh Jones.)—The Council is to erect 24 houses at Pencoed.—The Bridgend U.D.C. has passed plans for two houses in St. Marie-street, for Mr. P. Gaylard, and for a bungalow at Coychurch, for Mr. E. R. Plum.

GLASS HOUGHTON.—The M.H. held an inquiry into an application by the Pontefract R.D.C. for sanction to borrow £26,000 for a scheme for the provision of sewerage and sewage disposal works.

HULL.—The T.C. proposes the purchase of land at Anlaby Park, at a cost of £2,960, for a recreation ground. The B.E. has intimated that it will consider plans for the extension of the Grammar School. Amended plans are to be prepared for extensions at the mental hospital. The Water Committee is considering the modernising of the Cottingham pumping station, work estimated by the Engineer to involve an outlay of £245,000. A site in Igglemire-lane is to be purchased for purposes of an open-air school. The City Architect has prepared plans for the conversion of premises at Cottingham into a maternity home. The Housing Committee has agreed to give subsidies in respect of the following schemes: Eight houses, Newcomen-street, Mr. G. Spruit; 16 houses, Summergangs-road, Mr. Simmonite; four houses, Cottingham-road, Mr. M. Barnet; eight houses, Southcoates-lane, Mr. R. Ashton; four houses, Victoria-avenue, Mr. G. Spruit; four houses, Southcoates-avenue, Messrs. Boddy & Jaram; four houses, Beverley High-road, Mr. G. Overton; six houses, Southcoates-lane, Mr. Spruit; 19 houses, New Rosmead-street, Messrs. Lawrence Bros.; two houses, Aberdeen-street, Mr. W. Pinder; 8 houses, Desmond-avenue, for Mr. W. Garbutt.

IRONBRIDGE.—A large super-electricity substation is to be erected at Ironbridge on the banks of the River Severn as part of a large electrical scheme for the Midland Counties. The scheme has recently been sanctioned by the Electricity Commissioners, and work will be commenced immediately.

JARROW.—The T.C. has decided to open negotiations for sanction to borrow £5,460 for the erection of 14 "B" type houses.

KEIGHLEY.—The B.G. has approved the plan for the extension of the Nurses' Home in Fell-lane, at an estimated cost of £10,000. Application is to be made to the M.H. for sanction to the scheme.

KINOULTON.—A new cheese factory is to be built. Plans have been drawn up for the new building by Mr. E. Burnett, architect, of Hickling.

LEAMINGTON.—The T.C. approved plans: House, Northumberland-road, for Mr. J. G. Lucas; house, New-road, off Guy's Cliffe-avenue, for Mr. L. Overell.

LEEDS.—The T.C. has sold a site in Compton-road to Dr. Maurice Sherwin for the erection of a house and garage. — The T.C. decided to invite tenders for the erection of 500 houses, to be divided between the present municipal estates at Middleton, Crossgates, and Meanwood.—It is proposed to sell an acre on the Cross Gates housing estate to the Catholic Education Committee for the erection of buildings for religious or educational purposes. Sixteen public conveniences are to be constructed in various parts of the city at a cost of £6,700. Subsidies of £100 per house are to be paid in respect of the following houses to be built: Sixteen houses, Old-lane, for Mr. Booth; five houses, Chandos-place, Mr. C. Smith; six houses, East Moor-crescent, Mr. W. Rogers; two houses, Cambridge estate, Mr. Wm. Teal; house, Old-lane, Mr. W. Short; bungalow, Stainbeck-lane, Mr. E. B. Verral. ——Shop property in Briggate has been acquired by Messrs. J. Lyons & Co., Ltd., and the property is to be immediately converted into a modern cafe. The Electricity Committee are about to accept tenders for large extensions at the Electricity works in Whitehall-road; the work is in two separate contracts, one being for the constructional steelwork, the other being excavator, concretor and mason work, including the rock asphalter's work.

LISBELLAW.—The Northern Government has given grants for the erection of two new schools.

LIVERPOOL.—The Corporation propose to erect and equip new public baths and washhouses in Minshull-street. An inquiry has been held by the M.H. for sanction to borrow £21,600 for the purpose.

LLANELLY.—The G.W.R. Co. has notified the B.C. that it has instructed the preparation of plans and estimates for the improvement of Llanelly railway station. The Council has decided to press for the erection of a new station, the estimated cost of which is stated by the Company to be £300,000.

LONDON.—The Metropolitan Asylums Board propose the erection of two cottages at the Southern Hospital, estimated total cost about £1,200, including the value of the site.

LONDON (KENSINGTON).—The L.C.C. has agreed to sanction the borrowing by the B.C. of £23,150 in connection with the erection of houses comprising the fourth section of the St. Quintin estate housing scheme.

LONDON (LEWISHAM).—F. Chappell & Sons, office; Chas. J. T. Dadd, house, Honor Oak Park; A. Marsh, 15 houses, Fossil-road; H. S. Mitchell, 12 houses, Fordmill-road; J. G. Stephenson, for L.C.C., 115 houses, Downham Estate; J. G. Stephenson, for L.C.C., 53 houses, Downham Estate; R. J. Aitchison, seven houses, Tatnell-street; W. J. Scudamore, Ltd., five houses, Manor-lane.

LONDON (MUSWELL HILL).—The Church Council of St. James's propose erecting a new hall.

LONDON (TOTTENHAM).—The U.D.C. approved plans: Six houses, by H. Hawthorn, in Ashfield-road; factory, for J. H. Robinson & Co., in Northumberland Park.

LONDON (WESTMINSTER).—The City Council passed plans: Webb, Aston & Son, porch, Army & Navy Stores, Howick-place; Whinney, Son, & Austen Hall, rebuilding, corner of Buckingham Palace-road and Victoria-street; Jeeves, S. Gordon, rebuilding, 252–262, Regent-street, 19–25, Argyll-street, and 1, Little Argyll-street.

LONDON (WOOLWICH).—The L.C.C. has recommended the borrowing by the B.C. of £37,000 for the purpose of concreting ditches at Plumstead-marsh.

MANCHESTER.—The final plans for the new extension of Lewis's, Market-street, have been passed by the Improvements and Building Committee of the C.C. The cost of the new building is estimated at £300,000, and apart from the site the total approximate cost will be £1,000,000. The extensive operations involve the demolition of a large number of buildings in Fountain-street, etc., and the floor space of the new emporium will be 11 acres. Messrs. Ferguson, Palin & Co., Ltd., switch gear manufacturers, Openshaw, have secured 7 acres of land at the Croft, Edge-lane, for proposed extensions to their works.

MANSFIELD.—The T.C. passed plans: Hardys Kimberley Brewery Co., Ltd., rebuilding of "Black Swan," Albert-street and Midworth-street; F. Lagar. house, Sheepbridge-lane; Mason & Whiting, two houses, Intake-avenue; T. Knighton, bungalow, Southwell-road; A. R. Roe, two houses, Waverley-road; J. Allison, house, Southwell-road; G. W. Dickinson, house, Intake-avenue.

MEXBOROUGH.—The U.D.C. has made application to the M.H. for sanction to a loan for 52 houses. Request has been made to the Ministry for permission to invite tenders for a further 110 houses.

MIDDLESBROUGH.—Included in the projects under consideration by the Education Committee for the next financial year are the following: Provision of premises for accommodating mentally and physically defective children; extension of the Kirby Secondary School site by the purchase of additional land; and the erection of a central school on the Fallows School site. The Committee is to apply for permission to borrow £58,722, the estimated cost of the new schools at Marton-grove.

MILFORD.—Messrs. Machonochie Bros., Ltd., have acquired ten acres of land at the Priory, Milford Haven, and are, at once, to put in hand the erection of a factory for herring curing.

MIRFIELD.—The U.D.C. propose to erect new public conveniences, at an estimated cost of £415.

MYNYDDISLWYN.—The U.D.C. has passed plans for the erection of 46 houses by the Wyllie Estate Building Society.

NEWBURY.—Plans passed by T.C.: Two houses, Essex-street, Messrs. Cooke Bros.; house, Queen's-road, Mr. Slater; storeshed, Northbrook-street, Messrs. Blecket, Turner & Co.

NEWCASTLE.—The Corporation Town Improvement Committee has passed plans for the erection of a warehouse, stores, and office for Messrs. Gallagher, tobacco manufacturers, in Rutherford-street, Newcastle.

NORTHUMBERLAND.—The E.C. has resolved to prepare plans for the erection of the following schools: Shiremoor, Prudhoe, and Hirst. The authority has decided to expend £2,000 upon the establishment of two horticultural schools.

OLDHAM.—A new elementary public school is to be erected on a site in Ward-street by the E.C. Plans have been prepared by Mr. Fred Thorp, architect, Union Bank Chambers, Oldham, and tenders are now being invited. Sanction is to be sought by the Corporation from the M.H. in connection with the proposed extension of the heating system of the male and female infirmary wards, and certain alterations at the garage estimated to cost £1,559, and for an expenditure of £3,000 for the proposed electric light installation at the institution.

OXFORD.—The T.C. approved plans: C. Wright, outbuildings at house, Northmoor-road; G. H. Simmons, two houses, Lonsdale-road; Miss M. Fry, house, Victoria-road, Summertown; The Domestic Bazaar Co., Ltd., shop and store, corner of Cornmarket and St. Michael-streets; C. E. Rose, house, Duke-street, New Botley.

PEBWORTH.—The R.D.C. decided to abide by Government regulations with regard to the building of 28 houses at Willersey and Ashton-under-Hill. The estimate of Messrs. Espley & Co., Evesham, of £3,498, was the lowest for the Willersey scheme, and was accepted, and that of Mr. Crisp, Bretforten, at £5,388, was accepted for Pebworth.

PENRHIWCEIBER (GLAM.).—The War Memorial Committee have decided to erect a 60 ft. clock tower from drawings prepared by Mr. W. H. Williams, architect, Town Hall, Mountain Ash.

PERCY MAIN (NORTHUMBERLAND).—A new workmen's club and institute is to be erected at an approximate cost of £5,000. The building, which has been designed by Messsr. Marshall & Tweedy, architects, Newcastle, will contain meeting hall, recreation rooms, &c., and the contract has been placed with Mr. B. Peale, Tynemouth.

PORTADOWN.—The U.D.C. approved plans for the erection of new houses in the town.

PORTISHEAD.—The M.H. has sanctioned the borrowing of £5,500 for 10 houses.

PRESTON.—The T.C. passed plans: W. Houghton, house, Deepdale-road; J. Wignall, two houses, Portland-street; J. H. & W. Mangan, school, Blackpool-road; J. Miller, 14 houses, Winckley-road; J. Miller, two houses, Lytham-road; W. Smirk, two houses, Powis-road; H. Heaton, four houses, Heaton-road. —Application for sanction for a loan is to be made to the M.H. in connection with the Miller-road housing scheme for the following sums: Road surfacing, £1,147; houses, £24,000. The E.C. are considering a scheme of acquiring for educational purposes the premises adjoining Moor Park open-air school. The design of Mr. Hutchinson, of the firm of Messrs. James Powell & Son, Liverpool, has been accepted for the memorial window and tablet to be installed in the Broughton Parish Church, at a cost of £424.

RAWTENSTALL.—The Catholic school of St. James the Less is to be extended at an estimated cost of £3,500.

RHYMNEY.—The U.D.C. has applied for a grant of £2,500 from the Miners' Welfare Fund to lay out a recreation ground and develop the public park and erect a bandstand.

ROSSINGTON.—A Roman Catholic church is to be erected.

RUGBY.—The U.D.C. has decided to prepare a scheme for the provision of 100 houses on part of Eastlands estate.

ST. HELENS.—The Dawson Housing Schemes Co. are to erect 96 houses at Sutton, St. Helens, for sale to private purchasers, under an instalment plan. An immediate start is to be made.

SCARBOROUGH.—The Scarborough Spa Co., Ltd., is going to carry out a large scheme of improvements, comprising new shops, cafe, ball-room, &c. Plans have been prepared by Mr. F. Tugwell, architect, Scarborough.—Plans for the new school at Gawthorpe, Ossett, have been prepared by Mr. Edeson, the architect to the Ossett Council. The estimated cost is £12,500.

SEDGEFIELD.—The R.D.C. is to build 24 houses on a site at the end of Darlington-road.

SOUTH SHIELDS.—The nurses' quarters at Dean's Hospital are to be extended, at a cost of £300. The B.S. is to prepare plans for a convenience at Westoe. The B.S. has prepared a scheme for the lay-out of Gypsies Green, at a cost of £16,000. Tea rooms are to be erected at North Foreshore, at a cost of £7,500. The Education Committee is considering plans and estimates for a school of art, the governors having intimated that costs of schemes would be as follows:—Brick building £5,416, concrete building £4,874, neat, durable building, with wood framing, lined inside with asbestos sheeting, asbestos tiled roof, £2,500. Plans have been passed for roads and sewers on the housing estate, to cost £44,653.

SPENBOROUGH.—The Education Committee has decided upon the purchasing of two sites upon which it is proposed to erect a new Central School and a new Elementary School, subject to the approval of the Board of Education.

STIRLING.—The Royal Infirmary have decided to erect a new institution altogether on the most modern principle at a cost of from £65,000 to £75,000. The Stirling Education Committee propose to erect a new school in the Riverside district, at an estimated cost of about £40,000.

STOKE-ON-TRENT.—The T.C. has prepared a two-year housing programme, which includes the erection of 500 houses by the Council and 1,000 by private enterprise. It has been decided to lend Mrs. E. G. Brown £2,700 in respect of the erection of eight houses on the Harpfield Farm estate. A committee which has investigated the abattoir problem now recommends a comprehensive scheme on a site near the railway. Plans passed: 10 houses, Bagnall-street, N.S. Building Co.; eight houses, Longfield-road, Mr. G. Jones; house, Chapel-street, Mr. Hessell; house, Broadway, Mr. Cartledge; two houses, John-street, Mr. T. H. Buckley; two houses, Milton-road, Messrs. Shenton Bros.; two houses, Trentham-road, Mr. W. Edwards; house, Star and Garter-road, Mr. N. Clows; warehouse, Newcastle-road, Messrs. Twyfords, Ltd.; two houses, Stone-road, Mr. Cartlidge; four houses, Blurton-road, Messrs. Prestwood Bros.

STRETFORD.—The U.D.C. passed plans: Four shops, Moss-road, for J. Maunders; four shops, King-street, for Howard & Son.—Application has been made to the M.H. for sanction to the borrowing of the sum of £28,025 to defray the cost of the erection of the fifth and last instalment of 56 houses, and the construction of road and sewer works on the Seymour-grove housing site.—The B.E. approved plans for the erection and equipment of a new Central School at Gorse Hill, at an estimated cost of £16,130. Application had been made to the M.H. for sanction to a loan of £16,130.

SUNDERLAND.—The Board of Management of the Royal Infirmary are promoting a scheme for the extension of the infirmary, at an estimated cost of £150,000. The extension is to be on the present site. Plans have been prepared for building three new two-story pavilions on the south side of the main corridor, with balconies and roof wards, which, when completed, will increase the number of beds from 240 to 503. The scheme also includes the rebuilding of the administrative block, provision of ear, nose, and throat department, maternity wards, extended out-patient accommodation, wards for paying patients.—The Corporation Health Committee has approved plans for the erection of 18 houses onNewcastle-road, where a new building estate is to be developed; 18 on Barley Mow estate, Ryhope-road; and six in Inverness-street.

TANFIELD.—The U.D.C. has resolved to negotiate for the purchase of a site upon which to erect 30 houses, in blocks of six or eight houses.

THIRSK.—The Board of Guardians have decided to carry out extensions at the Union Infirmary in accordance with plans prepared by their architect, at an estimated cost of about £600, subject to the scheme being approved by the M.H.

THURNSCOE.—The U.D.C. has decided to build 50 houses, and purchase from Messrs. Taylor's Trust 27 acres of land adjoining the present housing estate.

WAKEFIELD.—Plans passed by R.D.C.: Bungalow, Doncaster-road, Sharlston, Mrs. Colley; extensions to pavilion at Overton, for the Denby Grange Colliery Athletic Club.—The M.H. has sanctioned the purchase of a site at Netherton upon which it is proposed to erect a housing scheme. The Wakefield Cathedral roof timbers are in urgent need of being renewed, and an appeal for £6,000 is being made to enable the work to be carried out.

WHICKHAM.—The U.D.C. has approved plans submitted by Messrs. Nordmann & Sons, Ltd., for the erection of 11 self-contained houses at Dunston.

WILLESDEN.—The U.D.C. approved plans: Three houses, Aylestone-avenue, Brondesbury Park, by Mr; F. Stanley Allen, for Western & Arnell; eight houses, Mount Pleasant-road, Kensal Rise, for Mr. W. Glanville; five houses, Chatsworth-road, and a house Coverdale-road, Cricklewood, for Mr. C. W. B. Simmonds; new offices, High-road, Willesden Green, by Mr. G. A. Sexton, for Pendleton & Co., Ltd.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Fletton, at King's Cross	2 15 3	Best Blue Pressed Staffs.	9 5 0
Do. grooved for plaster	2 16 3	Do. Bullnose ..	9 15 0
Do. Bullnose ..	3 8 3	Blue Wire Cuts	7 5 0
Best Stourbridge Fire brick :—			
2½ in.	8 11 0	3 in.....	10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers ..	23 0 0	D'ble Str'tch'rs	31 10 0
		D'ble Headers	28 10 0
		One Side and two Ends ..	32 10 0
Headers.....	22 10 0	Two Sides and one End	33 10 0
Quoins. Bullnose and 4½in. Flats	29 10 0	Splays and Squints	31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 11
2½ in. "	2 6	4 in. "	3 6

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	13 9	" "
Thames Sand	14 6	" "
Best Washed Sand	14 6	" "
½ in. Shingle for Ferro-Concrete	12 9	" "
¾ in. "	14 0	" "
¾ in. Broken Brick	11 6	" "
Pan Breeze	7 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to 51/- alongside at Vauxhall in 80-ton lots. £3 3 6

Ferrocrete per ton extra on above.....	0 10 0
Super Cement (waterproof).....	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White.....	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 11 9
Chalk Lime	2 11 9
Best Ground Blue Lias Lime	2 4 6
Hair	27 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in sacks 35s. 0d. per ton at rly. dpt.

STONE.

BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube..... s. d. 2 9½

Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube..... 2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube..... 4 4

Do. do. delivered on road wagons at above stations, per ft. cube..... 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.

Delivered at any Goods Station, London.

Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over "	17/-
Sawn two sides "	27/-
Sawn three or four sides "	32/-

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station London. s. d.

6 in. sawn two sides landings to sizes (under 30 ft. super.).....	Per Ft. Super	5 6
6 in. rubbed two sides, ditto.....	"	6 0
3 in. sawn two sides slabs (random sizes)	"	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes)	"	1 6½
1½ in. to 2 in. ditto, ditto	"	1 4

HARD YORK—

Delivered at any Goods Station London.

Scappled random blocks.....	Per Ft. Cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super.).....	Per Ft. Super	5 1½
6 in. rubbed two sides ditto	"	6 1½
4 in. sawn two sides slabs (random sizes)	"	2 10
3 in. ditto. ditto	"	2 1½
2 in. self-faced random flags..	Per Yard Super	9 0

ARTIFICIAL STONE.

Delivered in London Area in full van loads, per ft. cube:—Plain, 6s. 6d.; Moulded. 7s. 9d.; Cills, 8s. 3d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£32 0	3 × 6	£23 0
4 × 9	28 0	3 × 11	28 0
4 × 8	26 0	2 × 11	28 0
4 × 7	25 0	3 × 9	25 0
3 × 5	24 0	2½ × 9	25 0
3 × 7	23 0	3 × 4½	24 0
2½ × 7	22 0	3 × 4	24 0

PLANED BOARDS.

1 × 11	£31 0	1 × 9	£30 0

WOOD (*Continued*).

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
½	21/-	1½	32/6
¾	23/-	1¾	37/6
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches	per sq.
1	25/-	½	16/6
1½	32/6	¾	20/-
1¾	37/6	1	25/-

Inches	BATTENS	s. d.
½ × 2		2 6 per 100 ft.

MATCHINGS (BEST).

SAWN LATHS.

Per bundle	0 2 6

Dry Wainscot Oak, per ft. super, as inch	0 2 0	to	0 2 6
¾ in. do. do.	0 1 6	to	0 2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0 1 9	to	0 2 6
Cuba Mahogany	0 3 0	to	0 3 6
Teak (Rangoon, Moulmein or Java), per ft. cubs	0 14 0	to	—
American Whitewood planks, per ft. cubs ..	0 12 0	to	0 14 0
Best Scotch Glue, per cwt.	4 10 0	to	—
Liquid Glue, per cwt. ..	4 7 0	to	5 10 0

SLATES.

1st quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12.....	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11.....	31 5 0	16 by 10	17 12 6
20 by 12.....	29 15 0	16 by 8	13 15 0
20 by 10.....	25 12 6		

TILES.

Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand made	0 9 6
Machine made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
" Stanchions	17 10 0
In Roof Work	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	16 10 0	⅜ in. to ½ in...	13 10 0
½ in.	14 10 0	¾ in. to 2½ in...	13 0 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes. All sizes.	Fittings. ½" &up.	Fittings. ½" to ¾" inclusive.	Flanges ½" &up.	Flanges ½" to ¾" inclusive.
Black Gas....	50 %	50 %	47½ %	60 %	57½ %
Blue Water ..	45 %	45 %	42½ %	55 %	52½ %
Red Steam ..	40 %	40 %	37½ %	50 %	47½ %
Galv'd Gas ..	35 %	40 %	37½ %	50 %	47½ %
" Water.	28½ %	35 %	32½ %	45 %	42½ %
" Steam	22½ %	30 %	27½ %	40 %	37½ %

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.....	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.....	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.....	1/7½	1/5½	5d.

O.G. GUTTERS.

3 in.....	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.....	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.....	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. "	1/9½	1/4	2/0½
3 in. "	2/1½	1/8	2/5½
3½ in. "	2/6½	1/11½	2/10½
4 in. "	2/11½	2/4½	3/5½

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. "	3 6½	2 5½	3 3½
3 in. "	4 2½	2 8	4 0½
3½ in. "	4 7	3 3½	4 8½
4 in. "	5 1	3 9½	5 5

L.C.C. COATED DRAIN PIPES—London Prices ex works.

	Pipe.	Bends stock angles.	Branches stock angles.
	s. d.	s. d.	s. d.
3in. per yd. in 9ft. lengths	4 9	5 6	8 10
4 in. " "	6 3	6 8	11 4
5 in. " "	7 6	11 6	18 2
6 in. " "	8 10	14 4	23 5

Per ton in London.

IRON—	£ s. d.		£ s. d.
Common Bars.....	13 10 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 10 0	...	15 10 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	12 0 0	..	13 0 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	12 10 0	..	13 10 0
Hoop iron, basis price	16 10 0	..	17 10 0
" Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black—			
Ordinary sizes to 20 g...	14 10 0	..	15 10 0
" " " 24 g...	15 10 0	..	16 10 0
" " " 26 g...	17 10 0	..	18 10 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g...	£1 0 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.....	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g...	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	20 10 0	..	21 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	21 0 0	..	22 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	23 0 0	..	24 0 0
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker ..	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g. ..	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
	20 10 0	..	22 0 0
Cut Nails, 3in. to 6 in. (under 3in. usual trade extras.)			

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	51 0 0
Pipe in coils	51 10 0
Soil Pipe	54 10 0
Compo pipe.....	57 10 0

NOTE—Country delivery, 30s. per ton extra; lots under 3 cwt., 2s. per cwt. extra and over 3cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	£37 10 0	..	—
Do., ex country, carriage forward ..... per ton	£38 10 0	..	—

COPPER.

	s. d.
Seamless Copper tubes (basis) ..... per lb.	1 1½
Strong sheet..... "	2 3
Thin " ..... "	2 4
Copper nails ..... "	2 3
Copper wire ..... "	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.	
6 lbs. P. traps ..	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps ..	35/-	45/-	66/-	126/-	"

TIN—English Ingots, 2/6 per lb. SOLDER—Plumbers' 1/2, Tinmen's 1/4, Blowpipe 1/5 per lb.

PAINTS, &c.

Raw Linseed Oil, in pipes .....per gallon	0	4	2
" " " in barrels .... "	0	4	4
" " " in drums .... "	0	4	7
Boiled " " in barrels .... "	0	4	7
" " " in drums .... "	0	4	10
Turpentine in barrels ..... "	0	5	4
" in drums (10 gall.) .. "	0	5	7

Genuine Ground English White Lead, per ton 59 0 0
(In not less than 5 cwt. casks.)

GENUINE WHITE LEAD PAINT—

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Spedol" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered 81 5 0

Red Lead, Dry (packages extra)....per ton	52	10	0
Best Linseed Oil Putty.....per cwt.	0	15	0
Filocol .....per cwt	0	15	6
Size, XD Quality.....ftn	0	3	6

[*Continued on next page.*]

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per Ft.		Per Ft.
15 oz. fourths ..	3½d.	32 oz. fourths	8½d.
15 „ thirds	4½d.	32 „ thirds	10½d.
21 „ fourths ..	5d.	Obscured Sheet, 15 oz.	4d.
21 „ thirds	6½d.	„ „ 21 „	5½d.
26 „ fourths ..	6d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 „ thirds	7½d.	En'lled 15oz. 5½d., 21 oz	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4½d.
3/16 Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white ..	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best Ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 0
Fine Copal Flatting	ditto	1 0 6
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 10 0
Best Black Japan		0 10 6
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 6
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Cuirass Black Enamel		0 7 0

New Scottish Schools.

Forres Dean of Guild Court recently approved plans for the erection of a new school in that town at a cost of £18,000. Plans have also been passed for the Fife Educational Authority by Buckhaven Dean of Guild Court for a new mining school, fully equipped, to be erected in Buckhaven, at an estimated cost of £5,000.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

Perth.—The Dean of Guild Court has passed plans for extensive alterations to the County and City of Perth Royal Infirmary. The extensions include the extension of the sterilising room in the operating theatre, the nurses' dining-room, and the drying room of the laundry.

Brodick.—Operations will commence shortly in connection with the repairing of the little harbour at Brodick. The Marquis of Graham has made arrangements for the renovation, and the dues exacted should maintain the financial position of the harbour.

Falkirk.—The Town Council is preparing a new scheme for the erection of 282 houses which are to be erected on the sites of previous housing schemes at Merchiston, Thornhill and Carmuirs, as well as on the Stirling-road and Union-road site, which was recently acquired by the Council. It was stated at the last meeting of the Council that it has been the custom to keep the housing contracts inside the burgh, but the progress had been so slow that it was suggested that a different system should be adopted this time and labour obtained from whence it was most plentiful.

Glasgow.—The Housing Committee of the Corporation have approved of a big slum clearance scheme, which will mean the provision of new houses for a population of 16,246 people. It is proposed to erect 4,143 houses under this new scheme, and the houses will be spread over 127 different areas, 87 of these areas will be reserved for purposes of open spaces, mainly the sites of back lands; 23 areas, when cleared, will have houses erected on them; and 17 areas will be devoted to the construction of business premises only.

Elgin.—The Town Council has decided to invite offers for the erection of three blocks of four houses, similar to those already erected at Maisondieu-road, on the remainder of the unbuilt ground between Maisondieu-road and Victoria-road. The Council are aiming to erect about 20 houses of the cottage type.

Stirling.—The Housing Committee of the Town Council has resolved provisionally to proceed with housing schemes for 100 houses, of which 25 per cent. will be room and kitchen. The sites which have been proposed are, Butt Well Park, alongside Raploch-road; Borestone-crescent; Raploch Farm; Drip-road; Rockvale Mills; Craigs; Bannockburn-road, West Side.

Fifeshire.—The need for more houses in Dunfermline is very acute and a report to this effect was submitted to the Dunfermline Committee at their last meeting. It is estimated that about 500 houses are needed immediately. The needs of the mining areas especially are very great, and it is proposed to attend to these immediately. The Public Health Committee suggest a scheme for 100 houses to be erected, comprising 60 at Kelty and 40 at Crossgates. It is also suggested that the Fife Coal Co. should be asked to continue their present building operations at High Valleyfield to relieve the congestion there.

GLASGOW MASTER BUILDERS

THE annual meeting of the Glasgow Master Wrights' and Builders' Association was held recently in Glasgow. Mr. Hugh D. Findlay, president, in the chair. The annual report stated that during the past year the position in the building trade had been slightly better, but prices were still being cut to such a degree that the profit, if any, was almost nil. On the one hand, the public was crying out for houses; on the other, the contractors were not nearly fully occupied. Repair work to property had also been better, but proprietors and house factors were still bound to be careful regarding repairs as their profit margins were extremely small. This would continue until the restrictions on property were cancelled and some settled policy adopted that would give the people confidence to invest their money in it with some hope of a return. Mr. James L. Cowan and Mr. Robert Brown were elected president and vice-president respectively for the coming year.

Scottish Architects.

A meeting of the council of the Incorporation of Architects in Scotland was held recently at 15, Rutland-square, Edinburgh, Mr. John Keppie, F.R.I.B.A., President, in the chair. Reports were submitted by the Practice Committee and the Housing and Town Planning Committee. There were admitted to membership one Associate and four Students. A frame drawing of the Wallace Monument, Stirling, designed by the late Mr. G. T. Rochead, F.R.S.A., Glasgow, was presented by Mr. H. R. Williamson, architect, Edinburgh, and there was also presented by Mr. R. G. Wilson, jun., architect, Aberdeen, a portrait of Archibald Simpson, an early nineteenth-century Aberdeen architect, being a steel engraving by the late James Giles, R.S.A.

Victoria Infirmary.

Additional accommodation to Victoria Infirmary—for which plans were prepared in 1914, but discontinued owing to the war—is now in course of construction. The new pavilion, with its adjuncts, will involve an approximate expenditure of £100,000.

Roman Architecture.

A lecture on "The Roman and Italian Orders of Architecture" was recently given at Glasgow University, under the auspices of the Workers' Educational Association, by Professor Charles Gourlay, of the Royal Technical College, Glasgow. Professor Gourlay said that Roman architecture began with the conquest of Greece in 146 B.C., and lasted until the transfer of the capital of the Roman Empire to Constantinople in A.D. 328. Its full magnificence was displayed during the reign of the Emperors between 50 B.C. and A.D. 328, but the most defined work was done during the Augustan age, although there were culminating periods during the reigns of Trajan, Hadrian, and Antoninus Pius, when splendidly conceived buildings were erected.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-layers' Labourers.	Masons' Labourers.	Plasterers' Labourers.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/6	1/0½		
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3		
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½		
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½		
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3		
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3		
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-		
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3		
Coatbridge	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½		
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3½		
Dumfries	1/6	—	1/6	1/6	1/6	1/6	1/6	1/3½		
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3		
Dunfermline	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3½		
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½		
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/5½	1/2½		
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2		
Galashiels	1/6½	1/5½	1/6½	1/7	1/6	1/6½	1/6	1/2		
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½		
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½		
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½		
Hawick	1/6	1/6	1/6	1/6–1/0½	1/6	1/6	1/6	1/2		
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½		
Inverness	1/5	—	1/4½	1/4	1/5	1/5	1/4	1d. to 1/2		
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½		
Kirkcaldy	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3½		
Kirkwall	1/5	1/5	1/4	1/4	1/5	1/4	1/4	1/0		
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/- to 1/3		
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½		
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½		
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3		
Stirling	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3½		
Stirlingshire (Eastern District)	1/8-1/10	1/8-1/10	1/8	1/9	1/7	1/8	1/6½	1/3½		
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½		

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 913

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	32	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors and partitions	" "	6	0
Do. trusses	" "	8	6

		¾"	1"	1½"	2"
Deal rough close boarding	per sq.	35/6	40/-	45/-	72/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal edges shot	per sq.		44/6	53/-	60/6
Do. tongued and grooved	"		49/-	57/6	65/-
Do. matchings	"	45/-	51/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1¼"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting in to floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/7	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	64	0
Do. Do. in flats	"	63	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run.	0	6
Soldered seam	" "	1	6
Copper nailing	"	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	1/2	1/9	2/0	3/4	4/0	
Do. service	"	1/8	2/2	2/7	3/10		6/9
Do. soil	"					3/3	8/2
Bends in lead pipe	each						
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	7
Do. Do. Keen's	" "	3	7
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
Portland cement screed	" "	1	11
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
¼ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

* These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 119, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

COALFIELD BRICKYARDS, LTD. (201,168). Registered October 22. Brick manufacturers. Nominal capital, £7,500.

J. W. ASHDOWN, LTD. (201,157). Registered October 22. 838 and 840A, Old Kent-road, S.E. Builders' merchant and sanitary engineer. Nominal capital, £3,500.

STRANGE & SONS ELECTRICAL ENGINEERING CO., LTD. (201,143). 22, Walbrook, E.C.4. Builders and contractors, electrical and other engineers, &c. Nominal capital, £200.

DANIEL ELLIS, LTD. (201,337). Registered October 29. 40, Cross-street, Salford, Manchester. Builders' merchant, builder, general contractor, timber merchant, hardware, constructional woodwork and joinery. Nominal capital, £6,000.

WILTON & CO., LTD. (20,144). Registered November 1. "Arnlea," Jordans Village, Beaconsfield, Bucks. Builders, contractors, decorators, &c. Nominal capital, £100.

HARTS, LTD. (201,282). Registered October 27. 4, Albemarle Mansions, Finchley-road, Hampstead, N.W.3. Builders and contractors, &c. Nominal capital, £7,000.

DECORATIONS, LTD. (201,150). Registered October 22. 24, Park-road, Aston Cross, Birmingham. Decorators. Nominal capital, £500.

STRANGE & SONS (BEXHILL-ON-SEA), LTD. (201,162). Registered October 22. Builders and contractors, engineers, &c. Nominal capital, £200.

STRANGE & SONS (TUNBRIDGE WELLS AND TONBRIDGE), LTD. (201,164). Registered October 22. Builders and contractors, engineers, &c. Nominal capital, £500.

STRANGE & SONS (SEVENOAKS), LTD. (201,163). Registered October 22. Builders and contractors, engineers, &c. Nominal capital, £300.

WILLIAM CORAH & SON, LTD. (201,176) Registered October 22. Builder and contractor, Nominal capital, £8,000.

CLARK & FENN, LTD. (201,449). Registered November 3. 45, Sedgmoor-place, Camberwell, S.E. Fibrous and solid plasterers, moulders, modellers, decorators, builders, &c. Nominal capital, £2,000.

BINSTED BRICK & TILE CO., LTD. (201,002). Registered October 15. 51, High-street, Guildford. Brick and tile manufacturers and merchants. Nominal capital, £3,000.

CARLTON HILL JOINERY WORKS, LTD. (201,005). Registered October 15. Builders and general contractors. Nominal capital, £500.

W. H. AINSWORTH, LTD. (201,024). Registered October 15. Builder, plasterer and general contractor. Nominal capital, £1,500.

TILL & HARDING, LTD. (201,023). Registered October 15. Builder and contractor. Nominal capital, £1,000.

G. CROXFORD, LTD. (201,058). Registered October 17. Builder, contractor and timber merchant. Nominal capital, £100.

BUILDING SPECIALITIES, LTD. (201,031). Registered October 16. 3, Grosvenor-gardens, Westminster, S.W.1. Nominal capital, £1,000.

TOMEI & SONS, LTD. (201,245). Registered October 24. 42, St. John's-road, Penge, S.E.20. Architectural modeller. Nominal capital, £3,000.

KERR & CO. (BUILDERS), LTD. (201,623). Registered November 11. 4, St. Mary's Parsonage, Manchester. Builders and building contractors. Nominal capital, £1,000.

CEMCO, LTD. (201,592). Registered November 10. Spencer House, 4, South-place, Moorgate, E.C.2. Builders and contractors, &c. Nominal capital, £100.

NOLAN, WILLIAMS & CO., LTD. (201,583). Registered November 8. 61, Imperial Buildings, Ludgate-hill, E.C. Builders and decorators. Nominal capital, £100.

THE NATIONAL INSTITUTE OF PLUMBERS

THE National Institute of Plumbers recently held its half-yearly meeting at the Cutlers' Hall, Sheffield. The delegates were welcomed by the Master Cutler (Mr. W. W. Wood), who said that the Institute sought to maintain a high standard of efficiency in plumbing work, and took a keen interest in the training of apprentices. When so many skilled men were leaving this country because they could not find employment, it was of the utmost importance that the supply of technical and skilled men should be maintained.

A vote of thanks to the Master Cutler was proposed by Mr. R. H. Rowell, of Newcastle, and seconded by Mr. J. C. Smith, of London.

Mr. William Terrey, the general manager of the Sheffield Water Department, emphasised the point that only thoroughly efficient craftsmen should be allowed to do plumbing work. Unskilled persons should not be allowed to jeopardise public health by meddling with that of which they were not complete masters. In these days there was a tendency to make first cost and profit the main consideration, but in plumbing that was a tendency which was disastrous both in the interests of the plumbers and of public health. They were in the midst of great housing activity, and special emphasis should be laid on the need for theoretical and practical tests for those engaged on the important work of plumbing and sanitation. Health, protection against fire, and the general safety of the people depended largely upon the maintenance of an adequate water supply, and sound plumbing work contribute largely to this result. It was a weapon of no small importance in the struggle against disease in all its forms.

INDUSTRIAL HOUSING

A NEW form of industrial housing has been originated in the United States. The houses under this scheme are all detached, but sufficiently large to accommodate two families. The reason is that it has been found that the purchasers like to have tenants. For a house of the size now being built, the buyer rents out one of the apartments, and the rent helps to pay off his first mortgage, and in time he becomes the sole owner. After that the extra remittance brings in a regular income. Thirty-five of these two-family houses have been erected. Each house covers an area 35 ft. wide by 100 ft. deep. Gas, electricity, and separate heating plant are laid on. A porch, enclosed by glass, so as to make what is known in America as a "sun parlour," is included. On the first floor is the vestibule, the enclosed porch, a hall, living-room, dining-room, kitchen, two bedrooms, and a bathroom. The second floor has a third bedroom over the porch. The cost of each house is 11,750 dollars—a sum that is said to be far below normal prices. The first block of 35 houses was completely sold out before completed, and many of those who secured homes have already received far higher offers than they have paid. A special company, with a board of directors, is responsible for the financial control of these houses. Shares in the company, of the par value of 10 dollars each, are sold only to employees, who can pay by a deduction from the weekly earnings. Thus the capital has been provided and the employees have in the shares valuable securities, on the strength of which they are able to buy one of these houses.

Derby Commercial Scheme.

A contract has just been arranged by the architects, Messrs. Naylor, Sale & Woore, for the erection of a block of shops to be erected at the Market Head, Derby, at a cost of about £28,000. The builders are Messrs. S. Gee & Sons, Ltd., Derby. The constructional steelwork is to be provided and fixed by the Fawcett Construction Co., Ltd., Westminster.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

*** Denotes *accepted*. † Denotes *provisionally accepted*. ‡ Denotes *recommended for acceptance*. § Denotes *accepted subject to modifications*.**

BANSTEAD.—For modernisation of male blocks J and K at the Mental Hospital, for the L.C.C. :—

W. Lawrence & Son, Ltd.	£34,510	0	0
Holliday & Greenwood, Ltd.	34,326	0	0
J. Garrett & Son	33,926	0	0
G. E. Wallis & Sons, Ltd.	30,540	0	0
Prestige & Co., Ltd.	30,427	0	0
Cropley Bros., Ltd.	30,320	0	0
F. & H. F. Higgs, Ltd.	30,153	0	0
J. Carmichael (Contractors), Ltd.	29,073	0	0
Leslie & Co., Ltd.	28,327	0	0
W. J. Maddison, Ltd.	27,989	0	0
W. Akers & Co., Ltd.	26,890	0	0
Burnand & Pickett, Ltd.	24,892	3	9
*W. H. Gaze & Sons, Ltd.	24,263	0	0

BEXHILL.—Erection of 10 houses at Little Common, for the T.C. :—

	With Slate roofs.	*With Tiled roofs.*
White Bros.	£4,900	£5,800
W. J. Simms Sons & Cooke, Ltd	4,480	4,580
‡W. C. Greed	4,450	4,490

BEXHILL.—Erection of pavilion at the Palegrove, for the T.C. :—

T. McCormick	£895
White Bros.	875
E. Godwin & Sons	838
F. Banks	836
*W. C. Greed	785

BONEHURST.—Improvement of county bridge, for the Surrey C.C. :—

*A. Streeter & Co., Ltd., Godalming.... £6,794

CHORLEY.—For erection of a post office on a site off High-street, for H.M. Office of Works :—

*Baxendales, Ltd., Chorley.

CONGLETON.—For 40 non-parlour houses, for the B.C. Plans by Mr. W. H. Duncan Arthur, Borough Surveyor :—

*C. W. Machin & Son, Biddulph, for 20 houses, north aspect	£10,300
*H. Smith, Congleton, for 20 houses, south aspect	9,640

CROCKFORD.—Construction of a bridge to replace the ancient manorial bridge, for the Surrey C.C. :—

*A. Streeter & Co., Ltd., Godalming £9,707

CROYDON.—For construction of a railway siding, for the T.C. :—

*R. H. Neal & Co. £1,750

EAST GRINSTEAD.—For erection of six cottages, for the R.D.C. :—

*G. Wells £2,862 12

GREENFORD.—For sewerage scheme, for the U.D.C. :—

*Municipal Contracts, Ltd. £25,544

INCE.—For erection of a presbytery for the Rector of St. William's Church. Messrs. R. C. [Ralph & Co., Architects :—

*A. Wigan.

LEICESTER.—Construction of four concrete bridges for the T.C. :—

*J. J. Shardlow & Co. £8,274 10

LONDON.—For works in connection with the erection and completion of proposed flats at 34 and 36, Bosworth-road, for the Kennington B.C. :—

Arthur Vigor, Ltd.	£6,510
G. & E. Kent, Ltd.	5,089
B. Colley & Sons, Ltd.	5,890
F. J. Barrett	5,780
Lane Bros.	5,538
G. N. Watts, Ltd.	5,398
G. Potton & Sons, Ltd.	5,240
*J. P. Williams, Ltd.	5,180

LONDON.—For the completion of West Park Mental Hospital, for the L.C.C. :—

Kirk & Randall, Ltd.	£115,279	7	9
Patman & Fotheringham	109,761	0	0
Foster & Dicksee, Ltd.	111,118	5	4
Holloway Bros., Ltd.	109,677	0	0
Leslie & Co., Ltd.	104,560	2	10
Bovis, Ltd.	100,922	9	9
Jas. Carmichael, Ltd.	100,163	7	7
Wilson Lovatt & Sons	99,291	13	0
*Wm. Moss & Sons, Ltd.	98,774	15	7

(All of London.)

LONDON.—For erection of a block of dwellings, to be known as Archer House, on the Whitmore estate, Hoxton, for the L.C.C. :—

H. C. Horswill	£22,399	0	0
L. H. & R. Roberts	22,096	0	0
W. M. Brand	21,258	0	0
Holliday & Greenwood, Ltd.	20,787	0	0
Prestige & Co., Ltd.	20,274	0	0
Albert Monk	19,964	0	0
Allen Fairhead & Sons, Ltd.	19,890	0	0
J. E. Billings & Co., Ltd.	19,716	0	0
A. E. Symes	19,629	0	0
Rowley Bros.	19,598	0	0
*R. Woollaston & Co.,	19,585	10	4
Fred. & T. Thorne	19,481	0	0
Walter Jones & Sons, Ltd.	19,304	11	2

(All of London.)

LONDON.—For reconstruction of conveniences in Great Marlborough-street, for the Westminster Council :—

R. M. Pearson	£4,596
B. Finch & Co.	4,525
‡Sims & Russell	4,450

LONDON.—For erection of a schoolkeeper's house at Balham High-road school, for the L.C.C. The architect's comparable estimate is £1,094 :—

F. D. Hidden & Co., Ltd.	£1,341 0 0
W. H. Gaze & Sons, Ltd.	1,322 0 0
J. Garrett & Sons, Ltd.	1,295 0 0
A. Logan	1,294 14 10
Holliday & Greenwood, Ltd.	1,239 0 0
J. Carmichael (Contractors), Ltd.	1,214 0 0
J. Potterton & Sons	1,197 10 0
Sims & Russell	1,197 0 0
J. & C. Bowyer, Ltd.	1,173 0 0
*G. E. Wallis & Sons, Ltd.	1,096 0 0

LONDON.—For repairs to facades at Caxton Hall, for the Westminster Council :—

Alternative restoration in Metallic Composition—

Townsends, Ltd.	£2,005 0
Stone Preservation Co., Ltd.	1,825 0
John Daymond & Son, Ltd.	1,019 0
Sims & Russell	980 0
A. Dreyfus, Ltd.	431 0
E. D. Hook, Ltd.	121 0

Restoration of defective stonework with Red Hollington Stone—

E. D. Hook, Ltd.	£9,962 10
A. Dreyfus, Ltd.	3,600 0
John Daymond & Son, Ltd.	3,475 0
‡Raines & Porter, Ltd.	2,637 10
Frank Mortimer, Ltd. (for Corsehill stone)	2,443 15

LONDON.—For repairs at Ebury Bridge-road, for the Westminster Council :—

Burton Bros.	£635
J. L. Catterall & Sons, Ltd.	587
Townsends (Builders), Ltd.	575
Walter Lilly & Co.	520
Sims & Russell	465
T. W. Heath, Ltd.	433
‡E. D. Hook, Ltd.	429

LONDON.—For erection of steel fire-escape bridges, &c., for the Metropolitan Asylums Board, at Tooting Bec Hospital :—

Mitchell Bros., Stratford	£1,276 9 9
J. Bates & Sons, Aylestone	1,184 10 0
T. W. Palmer & Co., Merton Abbey	1,047 0 0
J. Westwood & Co., Ltd., Mill-Wall	995 0 0
A. D. Dawnay & Sons, Ltd., Battersea	960 0 0
Somerville-Barnard Construction Co., Ltd., New Cross	880 0 0
*G. Pauling, Ltd., Wimbledon	755 10 0

MANSFIELD.—For erection of 100 houses at Bull Farm estate, for the T.C. :—

*C. Hill.

(Subject to M.H. approval.)

MAPPLEBOROUGH GREEN.—Erection of picture house, for the Warwickshire C.C. :—

‡John Lamb, Ltd., of Studley £745

NETHERNE.—Provision of accommodation for nurses at mental hospital, for the Surrey C.C. :—

*Mullen & Lumsden, Ltd., Holborn £5,378

NEW WHITTINGTON.—For erection of a new sewerage disposal works, for the Chesterfield Corporation :—

*W. Moss & Sons, Loughborough £64,040

PAIGNTON.—Repairs and decorations at the isolation hospital, for the U.D.C. :—

*G. Macers £185

PORTISHEAD.—For erection of 10 houses, for the U.D.C. :—

*Burston & Hawkins, Clevedon £4,993

PORTSMOUTH.—For the building of The Oddfellows' Hall, Kingston-road, Portsmouth, Mr. H. J. Dyer, architect, Southsea :—

Day & Sons	£24,642
Corke & Co., Southsea	22,325
Cook & Sons	22,245
Dash & Sons, Gosport	22,201
Jas. Crockerell, Southsea	21,830
E. & A. Springings, Portsmouth	21,830
John Hunt, Ltd., Gosport	21,825
John Lay & Co., Portsmouth	21,747
Jno. Croad, Portsea	21,430
A. E. Porter & Son, Portsea	21,221
F. J. Privett, Southsea	21,127
Davis & Sons, Southsea	20,997
*S. Salter, Southsea	20,391
Tanner Bros., Southsea	20,296

STRETFORD.—For erection of the new Gorse Hill Central School, for the U.D.C. :—

*J. Partington & Co., Middleton Junction £9,450

STRETFORD.—For erection of 56 houses, for the U.D.C. :—

*Grimshaw & Thomas, Ltd. £24,922

TOTTENHAM.—For erection of 104 houses, for the D.C. Mr. S. Couchman is the architect :—

*Perry Bros. £54,961

WHITLEY.—Completion of housing contract, for Whitley and Monkseaton U.D.C. :—

*Calderwood, Chapman & Co., Ltd., Newcastle £11,233 7 3

WREXHAM.—For the erection of 56 houses, for the T.C. :—

H. Higgins & Son £25,408 10

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